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A PHOTOGRAPHIC INVESTIGATION OF TWENTY-FIVE  
SOUTHERN CEPHEID VARIABLE STARS.

BY HARLOW SHAPLEY.

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## A PHOTOGRAPHIC INVESTIGATION OF TWENTY-FIVE SOUTHERN CEPHEID VARIABLE STARS.

BY HARLOW SHAPLEY.

(Read by title May 14, 1930.)

As a detail in the study of the structure of the galactic system, the distribution of the Cepheid variables is of much significance. When associated with the remote star clouds, they afford at present the best means of estimating distances and dimensions; and those Cepheid variables that are not members of star clouds or globular clusters may help to indicate by their space distribution the location and extent of obscuring nebulosity.

The study of the very faint variable stars of the Milky Way requires the accumulation of special series of long exposure photographs. Such investigations are now in progress at the Harvard Observatory for a large number of fields, with emphasis on the star clouds in the general direction of the galactic center. The brighter isolated Cepheids can be satisfactorily studied by means of the plates of the sky patrol. Several hundred observations can be derived from existing plates for all those brighter than the twelfth magnitude, without the necessity of special series of photographs. The observations are well distributed throughout some thirty years. The plates therefore permit the satisfactory investigation of changes in period and light curve, and contribute to the general study of Cepheid variability.

The present investigation of Cepheid variable stars has been made possible through a grant by the AMERICAN ACADEMY OF ARTS AND SCIENCES from the income of the PERMANENT SCIENCE FUND of the BOSTON SAFE DEPOSIT AND TRUST COMPANY. Practically all the observations have been made by Mrs. Robinson, and Mr. Robinson has assisted in certain details of comparison star sequences and the reduction of the observations.

I have considered only those variable stars that lie in a region of the southern Milky Way which has already been chosen for detailed investigation.<sup>1</sup> In this region of the galactic center, covering some seventy square degrees, a study of the distribution of variable stars of all kinds, of bright and dark diffused nebulosity, of external galaxies, of star clouds, and of other special objects is under way. Nearly

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<sup>1</sup> Harvard Reprint, 52, 1928.

all the Cepheid variable stars of this region that appear in Prager's catalogue have been observed for the present study, except the very faint variables in the special Milky Way fields that are in the programs of various observers at Harvard and Nantucket. Twenty-eight stars have been measured, of which one was found to be an eclipsing system of the  $\beta$  Lyrae type and two apparently irregular variables. On the Cepheids 7883 observations have been made. Here I shall chiefly present observational results; their bearing on galactic structure and Cepheid variability will be discussed elsewhere.

General information concerning the twenty-five Cepheids is given in Table I. The contents of the first four columns are obvious. The ratio of the duration of increasing light to the length of the period is given in the fifth column. Only one-sixth of these variables have a ratio greater than 0.4 — the curves are nearly all decidedly asymmetrical. The mean maximum magnitude, minimum magnitude, and range are in columns six to eight; the range in spectral class as shown on Harvard plates is given in the ninth column, and the computed distance from the Sun, in parsecs, based on the new period-luminosity curve,<sup>1</sup> is given in the last column.

Revised elements of the light variations are given for all twenty-five variable stars in Table II. For the periods of less than one day (RW TrA, S Ara) the times have been reduced to the Sun. The probable errors of the epochs of maximum and of the periods have been obtained from least squares solutions. The last column of the table contains the difference between revised periods and those given in Prager's catalogue for 1930, in the sense Harvard — Prager. It appears that many of the corrections are large and that only two are smaller than the probable error of the corrected periods.

The comparison star sequences are given in Table III. The spectral classes in the last column were taken from the Henry Draper Catalogue when possible; otherwise the classifications have been made by Miss Cannon especially for this tabulation. Accuracy in the magnitudes of the photographic sequences is not claimed. The standard sequences in the southern sky, which were used as the basis for the special comparison star sequences of Table III, are still rather provisional. A scale error of greater than ten per cent is not likely, but the zero point of the magnitude sequences may be in error by two or three tenths of a magnitude and correspondingly affect the distances given in the last column of Table I.

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<sup>1</sup> Harvard Observatory Monograph No. 2, 1930.

The individual observations of the twenty-five Cepheid variable stars are given concisely in Table IV. The first column contains the Julian Day (with the first two numbers, 24, omitted for all observations), the decimal of a day, and a letter indicating with which telescope the photograph was made. The indications are as follows: e, AC (1-inch Cooke, Cambridge); f, AM (1-inch Cooke, Arequipa); q, AI ( $\frac{1}{2}$ -inch Voigtlander, Cambridge); r, RH (3-inch Ross, Cambridge); y, AY (2-inch Zeiss Tessar, Cambridge); z, AX (2-inch Ross-Zeiss Tessar, Arequipa and Bloemfontein). The phases have been computed with the revised elements. The photographic magnitudes are single estimates, except in a few cases of duplicate observations, where the means are tabulated.

Normal points for the variables are contained in Table V. The mean phases are in fractions of the whole period and are referred to a zero point half-way between maxima. Each mean contains in general twenty observations formed by taking the mean of successive groups of ten observations. The third decimal place in magnitude is computational only. The number of normal points for a given star depends on the number of observations.

For BF Ophiuchi, X Sagittarii, W Sagittarii, BB Sagittarii, and  $\kappa$  Pavonis three or four times the average number of observations were made in order to test for irregularities of period or light curve. In making the observations on the other Cepheid variables only a part of the total available material was used, but the plates were so selected as to cover the whole interval of thirty years that has elapsed since the sky patrol on small scale plates was inaugurated.

Mean light curves of the variables have been plotted from the coordinates in Table V and are reproduced in the accompanying figures. For stars which were extensively observed separate mean light curves are given for short intervals of time. For X and W Sagittarii the scattering of the observations indicates the difficulty of the estimates. The changes in form of the light curves can be judged best from the figures. It should be remembered that for these bright variables the average accuracy of estimating magnitudes is considerably less than for stars between the seventh and twelfth magnitudes.

The amplitude of variation, eighth column of Table I, varies from 0.66 for S Normae to 2.34 for WZ Sagittarii. These exceptional cases suggest the possibility of erroneous magnitude scales; but a restudy of the comparison star sequences seems to give little ground for

correction. Also, an examination of the scattering of the observations shows no appreciably greater error for the stars of large range than for those of small range, thus indicating with certainty that magnitude scales are not responsible for the large differences in amplitude. We should abandon the formerly common statement that ranges of Cepheid variables are practically all alike—one magnitude visual and twenty per cent more photographic.

*Summary.* Nearly eight thousand photographic observations have been made on twenty-five Cepheid variable stars situated in the southern Milky Way.

The average deviation of the photographic observations from the mean curve is approximately seven hundredths of a magnitude, indicating a very satisfactory accuracy.

For all the twenty-five Cepheids new formulae for maximum and period have been derived; new comparison star sequences have been set up, the amplitude of variation and the median magnitude determined, the distances computed, and the ranges in spectrum found from Harvard plates. The distances vary from two hundred forty parsecs to over five thousand; when the distance of the fainter Milky Way Cepheid variables becomes available the parallaxes here found will be of service in detailing the structure of the Milky Way in the direction of the galactic center.

The light curves derived for these variables show in general the dependence of form on period length, noted and studied by Hertzsprung. The discrepancies will be considered in a forthcoming study of the photographic light curves of more than a hundred of the bright galactic Cepheid variables.

May 14, 1930.

TABLE I. TWENTY-FIVE CEPHEID VARIABLES.

Variable Star	R.A. 1900	Dec. 1900	Galactic Coordinates	Number of Observations	$M_{\text{v}} - m$ P	Max.	Min.	Range	Spectrum	Distance in Parsecs
V Centauri	14 25 23	-56 °	26.7	284 ° +3	198	0.26	6.96	7.99	m	F5-G7
R Trianguli Australis	15 10 49	-66	07.7	285, -9	196	0.39	7.07	8.18	1.11	F5-G5
U Normae	15 34 37	-54	59.3	293, -1	200	0.43	9.91	11.27	1.36	G0-K5
S Trianguli Australis	15 52 12	-63	29.5	290, -9	203	0.30	6.44	7.83	1.39	F5-K0
U Trianguli Australis	15 58 25	-62	38.3	291, -9	210	0.25	7.96	8.84	0.88	F2-G5
S Normae	16 10 34	-57	39.2	296, -6	207	0.48	7.19	7.85	0.66	F8-G2
RW Trianguli Australis	16 50 45	-66	31.0	291, -16	240	0.23	10.79	11.70	0.91	A7
RV Scorpis	16 51 47	-33	27.2	319, +4	207	0.32	7.03	8.13	1.10	F5-G5
BF Ophiuchi	16 59 54	-26	26.6	325, +7	838	0.34	7.69	8.47	0.78	F8-K2
X Sagittarii	17 41 16	-27	47.5	329, -1	923	0.34	4.84	5.89	1.05	F5-G9
RY Scorpis	17 44 16	-33	40.5	324, -4	209	0.36	8.32	9.62	1.30	F8-K0
S Arae	17 51 27	-49	25.2	311, -13	232	0.17	9.97	11.10	1.13	A3-F5:
W Sagittarii	17 58 38	-29	35.1	330, -5	945	0.32	4.73	6.15	1.42	F2-G6
AP Sagittarii	18 06 58	-23	08.5	336, -4	206	0.30	7.51	8.31	0.80	F5-K0
WZ Sagittarii	18 11 07	-19	06.6	340, -3	209	0.33	8.12	10.46	2.34	G0-K5
XX Sagittarii	18 18 57	-16	51.0	343, -4	198	0.30	9.27	10.90	1.63	F8-K0
X Scuti	18 25 42	-13	10.7	346, -3	199	0.26	10.67	11.81	1.14	F5-K2
U Sagittarii	18 26 00	-19	11.7	341, -6	203	0.33	7.96	9.11	1.15	F8-K0
Y Scuti	18 32 36	-8	27.3	351, -3	183	0.39	10.69	11.72	1.03	G2-K7
RU Scuti	18 36 40	-4	12.4	356, -1	199	0.24	10.41	11.81	1.40	G5-M
Z Scuti	18 37 36	-5	55.1	355, -2	196	0.40	10.15	11.97	1.82	G0-M0
SS Scuti	18 38 18	-7	49.8	353, -3	194	0.40	8.70	9.92	1.22	F8-G5
YZ Sagittarii	18 43 42	-16	50.1	345, -9	200	0.49	8.08	8.80	0.72	G2-K2
BB Sagittarii	18 45 04	-20	24.6	342, -10	615	0.35	7.60	8.61	1.01	F8-K0
x Pavonis	18 46 38	-67	21.5	295, -26	473	0.44	4.73	5.50	0.77	F5-G5

TABLE II.

## REVISED ELEMENTS FOR TWENTY-FIVE CEPHEID VARIABLES

Star	Elements and Probable Errors	$\Delta P$
V Centauri	J. D. 2419068.927 + 5 <sup>d</sup> 494043E ±0.028 ± 0.000056	-0 <sup>d</sup> 000057
R Trianguli Australis	20224.577 + 3.389287E ±0.017 ± 0.000021	+0.000017
U Normae	20022.134 + 12.642665E ±0.028 ± 0.000194	+0.001665
S Trianguli Australis	19816.303 + 6.323557E ±0.016 ± 0.000044	+0.000457
U Trianguli Australis	19722.277 + 2.568339E ±0.013 ± 0.000014	+0.000039
S Normae	20911.024 + 9.752960E ±0.339 ± 0.001639	-0.006840
RW Trianguli Australis	18149.3341 + 0.37403507E* ±0.0012 ± 0.00000013	.....
RV Scorpii	20499.353 + 6.061428E ±0.016 ± 0.000036	-0.000772
BF Ophiuchi	20418.868 + 4.068012E ±0.009 ± 0.000013	+0.000112
X Sagittarii	19213.060 + 7.011154E ±0.016 ± 0.000048	+0.002054
RY Scorpii	19664.594 + 20.314133E ±0.122 ± 0.001038	+0.001733
S Arae	20047.2382 + 0.451888176E† ±0.0017 ± 0.000000262	.....
W Sagittarii	20293.773 + 7.594973E ±0.014 ± 0.000044	-0.001827

TABLE II.—*Cont.*

Star	Elements and Probable Errors	$\Delta P$
AP Sagittarii	J. D. 2419491.158 + 5.058132E ±0.020 ± 0.000047	+0.000132
WZ Sagittarii	20889.050 + 21.847498E ±0.028 ± 0.000217	-0.002402
XX Sagittarii	19189.730 + 6.424264E ±0.014 ± 0.000042	+0.000244
X Scuti	20934.435 + 4.198026E ±0.017 ± 0.000024	+0.000766
U Sagittarii	20600.325 + 6.744917E ±0.017 ± 0.000043	-0.001383
Y Scuti	20138.056 + 10.341392E ±0.024 ± 0.000088	-0.005608
RU Scuti	19198.251 + 19.696466E ±0.030 ± 0.000221	-0.005534
Z Scuti	20133.222 + 12.901723E ±0.040 ± 0.000180	+0.002723
SS Scuti	19984.342 + 3.6711843E ±0.014 ± 0.0000018	-0.0088157
YZ Sagittarii	19741.300 + 9.553151E ±0.024 ± 0.000086	-0.000079
BB Sagittarii	19282.142 + 6.636794E ±0.017 ± 0.000048	-0.1238
* Pavonis	19619.07 + 9.08979E ±0.22 ± 0.00089	-0.00116

\* The period of RW TrA in Prager is 0<sup>d</sup>699.

† Additional term of formula for S Arae is -0<sup>d</sup>0000000000095E<sup>2</sup>  
±0.00000000003SE<sup>3</sup>

## NOTES ON INDIVIDUAL STARS.

S Normae, which is located in a loose cluster, has a faint companion star which interferes with accurate magnitude work as well as with the determination of the spectrum.

BF Ophiuchi has been treated in detail on the basis of our new measures in Harvard Bulletin 875, 1930. The normal points and light curves are not reproduced in the present communication.

RY Scorpii has a faint companion star which is not evident on the small scale plates that were used for the magnitudes. Apparently it influences the range at minimum magnitude very little.

X Sagittarii, W Sagittarii, and x Pavonis, all being bright variables, were observed without an eyepiece on plates of the AC and AM series; for such bright variables the comparison stars are widely scattered.

S Arae was observed on only two spectrum plates, and the one giving Class F5 is very poor.

U Sagittarii is situated in a loose cluster and the magnitude estimates were accordingly difficult.

SS Scuti has been observed on sixty eight Nantucket plates in addition to the photographs of the Harvard collection. I am indebted to Miss Harwood for permission to use the Nantucket series.

BB Sagittarii has a bright companion of magnitude 7.74. On approximately one-third of the plates examined the images of the two stars were in contact.

TABLE III  
COMPARISON STAR SEQUENCES

Star	H.D.	R. A.		Dec.		Adopted Pg. Mag.	Spec- trum
		1900		1900			
V Centauri		<i>h</i>	<i>m</i>	°	'	<i>m</i>	
a	127486	14	26.5	-54	34	6.46	F5
b	126692	14	21.9	-55	41	7.22	A5
c	126876	14	23.0	-56	28	8.09	B8
R Trianguli Australis							
a	133683	15	0.6	-66	42	6.85	F8p
b	135139	15	8.4	-65	44	7.11	B9
c	136093	15	13.6	-65	51	7.48	A0
d	134709	15	6.2	-65	47	8.34	A0
U Normae							
a	139682	15	34.4	-54	34	9.21	A0
b	140058	15	36.5	-55	8	9.99	A5
c	....	15	36.2	-55	3	10.48	F2
d	....	15	35.3	-54	58	11.03	A7
e	....	15	36.0	-55	9	11.36	K5
S Trianguli Australis							
a	142514	15	49.8	-64	45	5.37	B8
b	144231	15	59.6	-62	42	6.80	B9
c	143832	15	57.5	-63	4	7.61	A0
d	143289	15	54.4	-63	5	8.35	F8
U Trianguli Australis							
a	143832	15	57.5	-63	4	7.61	A0
b	143289	15	54.4	-63	5	8.35	F8
c	143221	15	54.0	-62	50	8.89	K5
d	143039	15	52.9	-62	44	9.55	A2
S Normae							
a	144480	16	1.0	-57	40	6.61	A0
b	144858	16	2.8	-55	48	7.19	B5
c	144860	16	2.8	-57	20	7.60	B8
d	145417	16	5.7	-57	16	8.03	G5
RW Trianguli Australis							
a	....	16	51.8	-66	24	10.65	K7
b	....	16	52.8	-66	30	11.52	K2
c	....	16	55.8	-66	36	11.84	..

TABLE III.—*Cont.*

Star	H.D.	R.A.		Dec.		Adopted Pg. Mag.	Spec- trum
		1900	h m	1900	° '		
RV Scorpis							
a	152820	16	50.6	-33	6	6.94	K5
b	153136	16	52.5	-33	22	7.90	A5
c	153154	16	52.6	-33	16	8.54	A0
BF Ophiuchi							
a	154132	16	58.5	-25	30	6.94	A5
b	153636	16	55.5	-26	48	8.04	A0
c	153873	16	56.9	-26	57	8.54	K0
d	....	16	55.6	-26	7	9.10	A2
X Sagittarii							
a	165135	17	59.4	-30	26	4.20	K0
b	163685	17	52.3	-28	45	5.80	B5
c	161756	17	42.2	-26	57	6.34	B3
RY Scorpis							
a	161612	17	41.4	-33	58	7.05	G5
b	162222	17	44.8	-33	49	8.43	A0
c	162122	17	44.3	-33	55	9.44	A0
d	....	17	44.2	-33	52	10.34	F0
S Arae							
a	163237	17	50.0	-49	7	9.62	A0
b	163542	17	51.5	-49	28	10.17	A0
c	163340	17	50.5	-49	14	10.41	A0
d	....	17	51.6	-49	23	10.96	B9
e	....	17	51.4	-49	26	11.15	G0
W Sagittarii							
a	165135	17	59.4	-30	26	4.20	K0
b	163685	17	52.3	-28	45	5.80	B5
c	165365	18	0.5	-28	23	6.96	A0
AP Sagittarii							
a	165921	18	3.2	-24	1	7.43	B0
b	166107	18	4.0	-23	48	7.85	B5
c	166191	18	4.4	-23	35	8.51	F5

TABLE III.—*Cont.*

Star	H.D.	R.A.		Dec.		Adopted Pg. Mag.	Spec- trum
		1900	<i>h</i>	1900	°		
<b>WZ Sagittarii</b>							
a	167659	18	11.1	-19	0	7.48	B2
b	167375	18	9.8	-18	59	8.18	B
c	167520	18	10.5	-19	0	9.08	B8
d	....	18	11.4	-19	8	10.06	B3
e	....	18	10.9	-19	3	10.58	B8
<b>XX Sagittarii</b>							
a	168971	18	17.3	-17	4	8.83	A0
b	169457	18	19.6	-16	34	9.47	F2
c	169634	18	20.5	-16	49	9.98	G5
d	169228	18	18.6	-16	58	10.47	A2
e	....	18	20.0	-16	49	11.02	..
<b>X Scuti</b>							
a	170989	18	27.2	-13	8	9.80	A0
b	....	18	26.8	-13	14	10.92	B3
c	....	18	26.4	-13	12	11.31	G0
d	....	18	25.9	-13	16	11.98	A7
<b>U Sagittarii</b>							
a	170433	18	24.3	-18	47	7.23	K0
b	170657	18	25.5	-18	58	8.20	K0
c	170719	18	25.8	-19	9	8.95	B9
d	170860	18	26.5	-19	10	9.74	B9
<b>Y Scuti</b>							
a	172217	18	33.9	-8	35	9.66	K0
b	....	18	31.3	-8	31	10.94	F0
c	....	18	33.0	-8	29	11.17	B9
d	....	18	32.3	-8	26	11.45	B9
e	....	18	33.5	-8	30	11.75	B5
<b>RU Scuti</b>							
a	172593	18	36.0	-3	55	9.84	K2
b	....	18	35.9	-4	28	10.94	B2
c	....	18	36.1	-4	19	11.11	G0
d	....	18	36.1	-4	17	11.63	..
e	....	18	36.4	-4	2	11.83	G5

TABLE III.—*Cont.*

Star	H.D.	R.A.		Dec.		Adopted Pg. Mag.	Spec- trum
		1900	<i>h m</i>	1900	° '		
Z Scuti							
a	173005	18	38.1	-5	48	9.05	K2
b	173006	18	38.1	-5	53	10.04	B3
c	....	18	38.3	-5	50	10.95	B8
d	....	18	38.5	-5	40	11.80	B9
e	....	18	37.6	-5	48	12.10	F5
SS Scuti							
a	173219	18	39.1	-7	13	8.18	B0p
b	173202	18	39.0	-7	44	8.79	F0
c	172852	18	37.3	-7	48	9.79	A0
d	172810	18	37.1	-7	44	10.62	K2
YZ Sagittarii							
a	172984	18	38.0	-17	2	7.57	A2
b	172904	18	37.6	-16	53	8.32	A0
c	174113	18	43.8	-17	1	8.51	B9
d	173927	18	42.9	-17	8	8.91	K0
BB Sagittarii							
a	174115	18	43.8	-19	15	7.13	A0
b	174651	18	46.4	-20	19	8.48	A0
c	174652	18	46.4	-20	26	9.13	B9
κ Pavonis							
a	173948	18	43.0	-62	18	4.23	B2
b	172555	18	35.7	-64	58	5.03	A2
c	179366	19	7.1	-66	50	5.61	A2
d	175986	18	52.8	-68	54	6.23	G0

TABLE IV  
PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS  
SECTION A

J. D. and Telescope	V Cen Phase	V Cen Mag.	U Nor Phase	U Nor Mag.	R TrA Phase	R TrA Mag.	S TrA Phase	S TrA Mag.	U TrA Phase	U TrA Mag.
14865.57f	5.08	7.39	1.64	10.64	2.85	7.65	0.61	6.66	...	...
15109.75f	2.03	7.74	5.61	11.19	3.00	7.33	...	...	0.22	8.13
15147.73f	1.55	7.66	5.66	11.12	0.30	7.11	4.54	7.76	2.23	8.67
15220.60f	3.00	7.83	2.68	10.64	2.00	7.91	...	...	0.62	8.73
15474.66f	4.33	8.00	3.89	10.92	1.86	8.00	2.64	7.20	0.42	8.43
15514.66f	0.38	7.07	5.96	11.33	1.19	7.65	4.70	7.76	1.89	8.84
15590.61f	4.91	7.57	6.05	11.26	...	...	4.77	7.68	0.79	8.70
15635.52f	0.37	7.07	0.39	9.83	0.04	7.06	5.41	7.20	2.04	8.62
15872.76f	1.37	7.39	10.06	10.98	0.03	7.08	2.36	7.20	0.42	8.24
15885.63f	3.25	8.00	10.29	10.86	2.73	7.82	2.58	7.20	0.45	8.20
15898.59f	5.22	6.99	10.61	10.86	2.13	8.09	2.89	7.44	0.57	8.46
15933.64f	1.81	7.74	7.73	11.36	3.29	7.06	0.00	6.37	2.23	8.62
15940.51f	3.19	8.00	1.96	10.54	3.38	7.14	0.55	6.58	1.40	8.62
15942.66f	5.34	6.92	4.11	10.98	2.14	8.09	2.70	7.28	0.98	8.67
16240.59f	...	...	11.26	10.70	1.81	8.09	3.42	7.53	0.98	8.70
16242.65f	3.16	7.74	0.67	10.18	0.49	7.36	5.48	7.28	0.47	8.35
16249.72f	4.73	7.74	7.74	11.36	0.78	7.29	6.23	6.66	2.41	8.51
16264.67f	3.20	7.92	10.05	10.86	2.17	8.09	2.21	7.36	1.95	8.84
16298.60f	4.16	8.00	6.05	11.26	2.21	8.09	4.52	7.84	2.49	8.13
16309.55f	4.13	7.92	4.36	11.16	2.99	7.65	2.82	7.36	0.60	8.57
16361.53f	1.17	7.30	5.77	11.16	0.74	7.65	...	...	1.21	8.81
16375.53f	4.18	8.00	7.13	11.36	1.18	7.65	5.57	7.36	2.37	8.46

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	V Cen	SECTION A			SECTION B			U TrA		
		Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase
16496.86f	4.64	7.92	2.03	10.54	0.50	7.48	0.42	6.51	0.42	8.24
16557.87f	5.21	7.07	...	...	0.50	7.56	...	...	2.35	8.40
16563.77f	0.13	6.99	5.73	11.29	3.01	7.91	4.10	7.61	0.55	8.46
16589.71f	4.09	8.00	6.38	11.26	1.84	8.09	4.74	7.84	0.81	8.40
16607.76f	0.16	6.92	11.79	10.24	2.94	7.74	3.82	7.76	0.88	8.62
16617.66f	4.57	7.83	9.05	11.16	2.67	7.82	1.08	6.80	0.50	8.20
16636.68f	1.61	7.57	2.78	10.76	1.36	7.91	1.13	7.04	1.55	8.84
16647.64f	1.59	7.74	1.10	10.24	2.15	7.91	5.76	6.96	2.23	8.67
16664.61f	2.07	7.74	5.42	11.09	2.17	8.00	3.76	7.84	1.22	8.67
16684.56f	0.05	6.99	0.09	9.76	1.79	8.09	4.74	7.61	0.63	8.51
16918.77f	3.51	7.92	6.73	11.22	2.14	8.18	4.98	7.53	1.12	8.73
16951.70f	3.47	7.92	1.73	10.54	1.17	7.65	6.29	6.37	0.66	8.28
16971.63f	1.43	7.57	9.02	11.16	0.77	7.36	0.93	7.04	0.04	8.13
16979.60f	3.90	7.92	4.35	11.16	1.96	8.09	2.57	7.20	0.31	8.28
17018.63f	4.48	7.83	...	...	0.32	7.22	3.66	7.61	...	...
17035.62f	4.98	7.22	9.80	10.86	0.37	7.36	1.68	7.20	2.39	8.13
17069.58f	0.48	6.99	5.83	11.26	0.43	7.25	4.02	7.84	0.40	8.13
17087.54f	1.96	7.66	11.15	10.59	1.44	8.00	3.01	7.44	0.38	8.20
17094.54f	3.47	8.00	5.50	11.12	1.66	8.09	3.69	7.61	2.24	8.73
17238.87f	4.95	7.57	10.76	10.76	0.25	7.33	2.58	7.28	0.18	8.28
17297.75f	3.40	7.83	6.43	11.33	1.52	8.09	4.55	7.84	2.55	7.83
17341.75f	3.45	7.92	12.50	9.76	1.46	8.09	4.28	7.84	0.32	8.13
17375.63f	4.36	7.92	8.46	11.22	1.44	7.91	0.22	6.51	0.81	8.51
17405.65f	1.42	7.48	0.55	9.83	0.96	7.65	4.95	7.76	0.01	8.05

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TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS—*Cont.*

J. D. and Telescope	V Cen	SECTION A						U TrA Phase Mag.
		Phase	Mag.	U Nor	Phase	Mag.	R TrA	
17416.54f	1.32	7.48	11.44	10.33	1.88	7.91	3.19	7.53
17704.58f	3.67	7.92	8.70	11.22	1.63	8.04	0.35	6.58
17709.71f	3.31	8.00	1.18	10.33	3.37	7.08	5.48	7.20
17711.62f	5.22	6.99	3.09	10.76	1.89	8.00	1.06	7.04
17727.66f	4.77	7.74	6.49	11.36	0.99	7.56	... ...	0.98
17758.58f	2.73	7.92	12.13	9.83	1.40	8.09	3.76	7.68
17774.57f	2.24	7.74	2.83	10.81	0.45	7.36	0.78	6.58
17992.83f	0.74	7.07	6.17	11.29	1.79	8.09	4.03	7.92
18036.82f	0.77	7.07	... ...	... ...	1.72	8.00	3.76	7.76
18042.77f	1.23	7.48	7.53	11.19	0.89	7.91	2.39	7.36
18069.75f	0.74	7.97	7.23	11.36	0.76	7.82	5.33	1.48
18083.71f	3.71	8.00	8.55	11.22	1.16	7.91	0.06	6.37
18102.56f	0.58	6.99	2.11	10.64	3.07	7.33	6.26	6.88
18102.64f	0.66	7.07	2.19	10.76	3.15	7.25	0.02	6.51
18126.57f	2.62	7.92	0.84	10.13	3.35	7.25	4.98	7.84
18144.54f	4.11	8.00	6.16	11.36	0.99	7.82	3.98	7.68
18160.52f	3.60	8.00	9.50	10.98	0.02	7.06	0.99	6.66
18385.78f	3.61	7.92	... ...	... ...	1.59	8.00	4.92	7.84
18394.71f	1.55	7.48	3.48	10.81	0.35	7.33	1.21	7.12
18414.81f	5.17	7.15	10.94	10.86	0.11	7.11	2.34	7.28
18434.73f	3.11	7.92	5.57	11.16	3.09	7.36	3.29	7.36
18440.76f	3.65	8.00	11.60	10.24	2.34	8.09	2.99	7.44
18450.61f	2.51	7.74	8.81	11.03	2.02	8.09	0.20	6.58
18453.59f	0.00	6.92	11.79	10.13	1.61	8.09	3.18	7.44

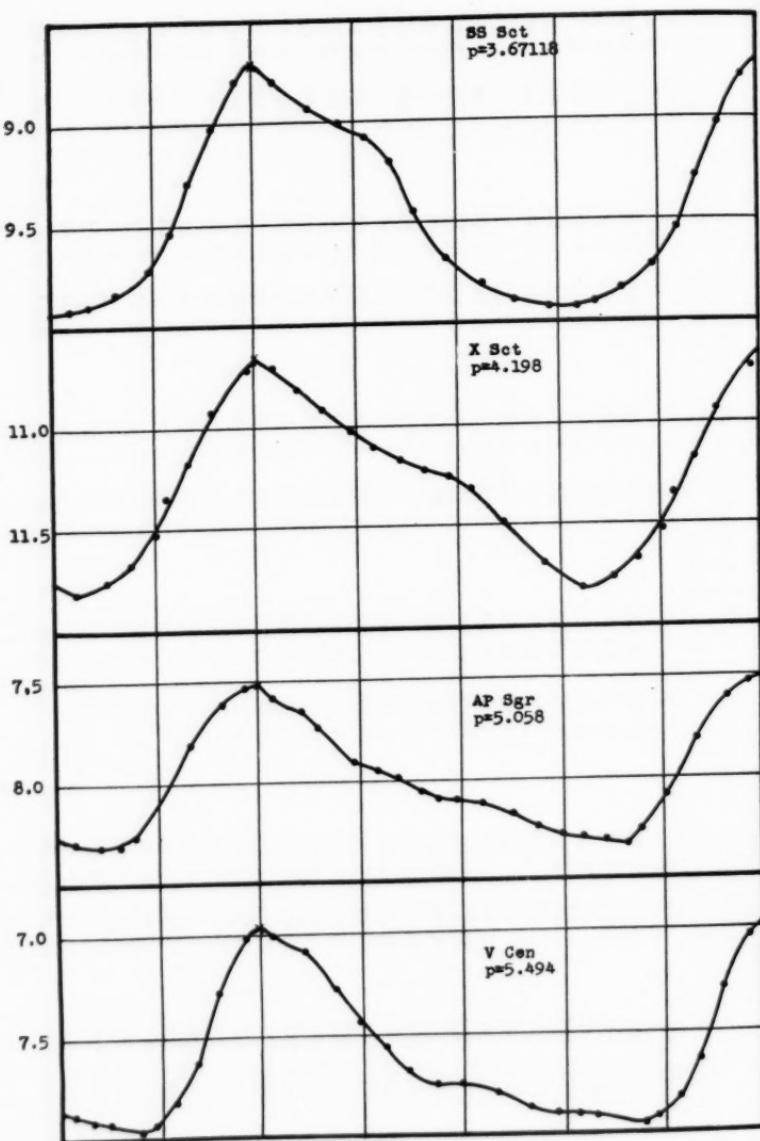


TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	V Cen Phase	SECTION A						U TrA Phase Mag.
		U Nor Phase	Mag.	R TrA Phase	Mag.	S TrA Phase	Mag.	
18476.51f	0.94	7.22	9.42	11.12	0.81	7.33	0.80	6.66
18478.72f	3.15	7.92	11.63	10.28	3.02	7.29	3.01	7.36
18497.63f	0.08	6.99	5.26	11.12	1.59	8.09	2.95	7.28
18498.54f	0.99	7.22	6.17	11.22	2.50	8.00	3.86	7.76
18506.58f	3.54	7.92	1.57	10.64	0.37	7.33	5.58	7.04
18533.51f	3.00	7.83	3.21	10.92	0.19	7.33	0.89	7.04
18750.77f	0.50	7.07	.....	.....	0.53	7.40	3.15	7.44
18779.84f	2.10	7.83	9.33	10.98	2.49	7.82	0.60	6.88
18797.74f	3.52	8.00	1.94	10.64	0.05	7.11	5.85	6.96
18823.68f	1.98	7.83	2.60	10.86	2.27	8.09	0.18	6.66
18859.58f	4.92	7.57	0.57	10.13	0.89	7.82	4.46	7.84
18861.58f	1.43	7.74	2.57	10.86	2.89	7.74	0.13	6.66
18884.55f	2.42	7.74	0.26	9.83	2.13	7.91	4.13	7.76
19136.53f	1.97	7.83	12.33	9.83	0.21	7.08	3.47	7.36
19196.64f	1.35	7.74	8.92	11.09	2.41	8.09	0.05	6.58
19203.57f	2.79	7.92	3.21	10.86	2.56	7.82	0.65	6.88
19226.55f	3.79	7.92	0.90	10.38	1.81	7.91	4.66	7.92
19234.59f	0.84	7.07	8.94	11.09	3.07	7.06	0.05	6.58
19239.59f	0.35	7.07	.....	.....	1.30	7.82	5.05	7.84
19253.55f	3.32	7.83	2.62	10.86	1.70	8.00	0.04	6.37
19254.54f	4.31	8.00	3.61	10.86	2.69	7.91	1.03	6.96
19531.73f	1.30	7.48	.....	.....	1.96	8.00	6.31	6.51
19540.71f	4.79	7.74	11.64	10.13	0.77	7.74	2.64	7.28
19543.71f	2.30	7.83	.....	.....	0.38	7.18	5.64	6.88

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION A						SECTION B					
	V Cen	Phase	Mag.	U Nor	Phase	Mag.	R TrA	Phase	Mag.	S TrA	Phase	Mag.
19557.72f	5.32	6.99	3.36	10.86	0.83	7.74	0.68	6.88	2.39	8.51		
19559.66f	1.76	7.66	5.30	11.22	2.77	7.82	2.62	7.28	1.76	8.84		
19572.61f	3.73	7.92	5.61	11.36	2.17	8.09	2.93	7.28	1.87	8.78		
19589.64f	4.27	8.00	10.00	10.86	2.25	7.91	0.99	6.80	0.92	8.73		
19604.59f	2.74	7.83	12.31	9.83	0.25	7.06	3.29	7.28	0.46	8.13		
20019.51f	0.11	6.99	10.02	10.86	1.68	8.00	0.85	6.88	1.87	8.73		
20033.51f	3.13	8.00	11.38	10.59	2.12	7.91	2.21	7.20	0.46	8.40		
20045.52f	4.15	8.00	10.74	10.86	0.58	7.25	1.57	7.20	2.20	8.78		
20278.73f	1.11	7.57	3.74	11.12	3.31	7.06	0.81	6.88	1.69	8.89		
20279.75f	2.13	7.66	4.76	11.26	0.94	7.74	1.83	7.20	0.14	7.91		
20287.68f	4.57	7.83	0.05	9.91	2.10	8.09	3.43	7.68	0.37	8.40		
20314.62f	4.04	8.00	1.70	10.64	1.92	8.00	...	...	1.63	8.78		
20325.62f	4.05	7.92	0.06	9.83	2.75	7.74	3.43	7.36	2.35	8.20		
20326.55f	4.98	7.57	0.99	10.54	0.29	7.08	4.36	7.84	0.71	8.67		
20332.56f	0.00	6.99	7.00	11.33	2.92	7.25	4.05	7.68	1.59	8.78		
20338.58f	0.53	6.99	0.38	10.08	2.16	8.00	3.75	7.68	2.47	8.20		
20349.60f	0.56	7.15	11.40	10.48	3.01	7.25	2.12	7.36	0.65	8.46		
20358.54f	4.01	8.00	7.70	11.26	1.78	8.00	4.73	7.68	1.88	8.89		
20389.53f	2.03	7.74	0.76	10.33	2.27	8.00	4.11	7.76	2.05	8.73		
20392.53f	5.03	7.57	3.76	11.03	1.88	7.91	...	...	2.48	8.13		
20607.76f	...	...	4.06	11.16	0.19	7.22	1.01	6.96	1.97	8.84		
20612.84f	...	...	9.14	11.06	1.88	7.91	6.09	7.04	1.92	8.78		
20681.60f	2.92	7.74	2.05	10.48	2.86	7.82	5.29	7.36	1.33	8.78		
20688.62f	4.44	8.00	9.07	11.09	3.10	7.33	5.99	6.96	0.65	8.20		

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TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION A						U TrA					
	V Cen Phase	Mag.	U Nor Phase	Mag.	R TrA Phase	Mag.	S TrA Phase	Mag.	U TrA Phase	Mag.	U TrA Phase	Mag.
20695.60f	0.44	7.07	3.40	10.92	3.30	7.22	0.32	6.88	2.49	8.13		
20709.54f	3.39	8.00	4.70	11.16	0.29	7.29	1.62	7.20	1.02	8.67		
20720.55f	3.41	7.83	3.07	10.86	1.14	7.91	6.30	6.37	1.76	8.84		
20747.48f	2.87	7.92	4.71	11.16	0.95	7.82	1.61	7.20	0.44	8.20		
20756.48f	0.88	7.39	1.07	10.33	3.17	7.22	4.29	7.84	1.73	8.73		
20757.50f	1.90	7.74	2.09	10.59	0.80	7.65	5.31	7.28	0.18	7.98		
20935.89f	4.48	7.92	3.48	11.06	2.95	7.36	0.32	6.58	1.36	8.84		
20959.77f	0.89	7.48	2.08	10.70	3.11	7.29	5.23	7.44	2.12	8.78		
20990.63f	4.28	7.92	7.65	11.22	0.07	7.22	4.47	7.92	2.16	8.84		
20991.73f	5.38	7.07	8.75	11.09	....	....	....	....	0.69	8.28		
21006.67f	3.84	7.92	11.05	10.64	2.56	8.00	1.54	7.28	0.22	8.20		
21007.68f	4.85	7.74	12.06	9.91	0.18	7.11	2.55	7.28	1.23	8.67		
21009.70f	1.38	7.66	1.44	10.59	2.20	8.00	4.57	7.84	0.69	8.40		
21022.68f	....	....	....	....	1.62	7.91	4.90	7.92	0.82	8.73		
21046.54f	5.25	7.15	0.35	10.08	1.76	7.82	3.47	7.68	1.57	8.73		
21049.55f	2.77	7.83	3.36	10.86	1.38	7.82	0.11	6.66	2.01	8.84		
21050.55f	3.77	7.92	4.36	11.16	2.38	7.91	1.15	6.88	0.44	8.57		
21080.55f	....	....	9.07	11.12	1.87	7.91	5.86	6.88	2.19	8.67		
21081.54f	....	....	10.06	10.86	2.86	7.74	0.53	6.51	0.61	8.57		
21127.49f	3.79	8.00	....	....	1.36	7.82	2.21	7.36	0.33	8.20		
21332.84f	....	....	8.51	11.12	3.36	7.03	5.21	7.68	0.21	8.05		
21336.76f	4.29	7.83	12.43	9.91	....	....	2.80	7.20	1.57	8.78		
21344.76f	1.30	7.48	7.78	11.22	....	....	4.48	7.68	1.86	8.84		
21361.70f	1.76	7.74	12.09	9.91	1.71	8.00	2.45	7.20	0.82	8.51		

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	V Cen	SECTION A						U TRA					
		Phase	Mag.	U Nor	R TrA	S TrA	Phase	Mag.	Phase	Mag.	U	Phase	Mag.
21367.67f	2.23	7.74	5.41	11.29	0.90	7.82	2.10	7.36	1.66	8.73			
21370.71f	5.27	7.15	8.45	11.22	0.55	7.65	5.14	7.44	2.13	8.73			
21390.67f	3.26	7.83	3.13	10.86	....	....	6.12	6.88	1.54	8.89			
21391.66f	4.25	7.83	4.12	11.19	....	....	0.79	6.96	2.53	8.13			
21396.65f	....	....	9.11	11.29	2.77	7.82	5.78	6.88	2.38	8.13			
21397.66f	....	....	....	....	0.39	7.22	0.47	6.51	0.83	8.73			
21400.61f	2.21	7.66	0.43	10.13	....	....	3.42	7.28	1.21	8.67			
21402.60f	4.20	7.92	2.42	10.76	1.94	8.00	5.41	7.28	0.63	8.20			
21421.53f	1.15	7.48	8.70	11.03	0.53	7.65	5.37	7.36	1.58	8.78			
21424.54f	4.16	7.92	11.71	10.18	0.16	7.14	2.05	7.28	2.02	8.73			
21428.52f	2.65	7.74	3.05	10.86	0.75	7.33	6.03	6.58	0.87	8.67			
21430.50f	4.63	7.74	5.03	11.19	2.73	7.82	1.69	7.20	0.28	8.13			
21431.50f	0.13	6.99	6.03	11.36	0.34	7.11	2.69	7.28	1.28	8.67			
21440.50f	3.64	7.92	2.39	10.86	2.56	7.82	5.37	7.36	0.00	7.98			
21449.54f	....	....	11.43	11.36	1.43	8.00	1.76	7.28	1.34	8.78			
21731.68f	3.64	7.83	2.79	10.86	2.26	7.82	5.66	7.04	0.96	8.67			
21749.67f	5.14	7.07	8.13	11.36	....	....	4.68	7.68	0.97	8.78			
21751.66f	1.64	7.57	10.12	10.86	....	....	0.35	6.80	0.40	8.46			
21755.66f	0.15	6.92	1.48	10.70	....	....	4.35	7.76	1.83	8.84			
21756.69f	....	....	2.51	10.86	0.16	7.08	5.38	7.28	....	....			
21758.67f	3.16	7.74	4.49	11.26	....	....	1.04	7.04	2.27	8.73			
21776.58f	4.58	7.74	9.76	10.86	3.10	7.36	6.30	6.37	2.20	8.62			
21789.54f	1.06	7.30	10.08	10.76	2.50	7.74	0.29	6.58	2.32	8.51			
21790.54f	2.06	7.66	11.08	10.59	0.11	7.18	1.29	7.04	0.75	8.46			

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Contd.*

## TWENTY-FIVE SOUTHERN CEPHEID VARIABLE STARS

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J. D. and Telescope	SECTION A						SECTION B					
	V Cen	Phase	Mag.	U Nor	Phase	Mag.	R TrA	Phase	Mag.	S TrA	Phase	Mag.
21870.49f	5.10	7.30	2.53	10.64	...	...	5.35	7.28	1.08	8.73	...	...
22100.65f	4.51	7.83	5.12	11.29	1.80	8.00	1.54	7.28	0.09	7.83	...	...
22108.62f	1.49	7.48	0.45	10.13	2.99	7.48	3.19	7.44	0.36	8.13	...	...
22129.60f	...	...	8.78	11.29	0.24	7.11	...	...	0.79	8.40	...	...
22131.66f	2.55	7.74	10.84	10.64	...	...	0.94	6.96	0.28	8.13	...	...
22136.64f	2.04	7.83	3.18	10.86	...	...	5.92	7.04	...	...	...	...
22138.54f	...	...	5.08	11.29	2.41	7.82	...	...	2.02	8.78	...	...
22175.56f	...	...	4.17	11.12	2.14	8.09	0.57	6.66	0.52	8.13	...	...
22193.54f	...	...	9.51	11.19	3.18	7.14	5.90	6.96	0.52	8.28	...	...
22196.51f	1.47	7.74	12.48	9.91	...	...	2.55	7.20	0.92	8.73	...	...
22455.70f	2.44	7.66	6.17	11.26	0.97	7.65	2.47	7.28	0.71	8.28	...	...
22517.51f	3.82	7.83	4.77	11.19	1.77	8.00	1.05	6.96	0.88	8.51	...	...
22541.53f	0.37	6.99	...	...	...	...	6.10	6.37	1.79	8.78	...	...
22542.55f	...	...	4.53	11.29	3.09	7.25	0.79	6.66	0.24	8.13	...	...
23180.68f	2.21	7.74	10.52	10.64	0.64	7.74	0.24	6.51	1.42	8.78	...	...
23197.74f	2.79	7.74	2.30	10.81	0.76	7.74	4.66	7.92	0.50	8.05	...	...
23199.60f	4.65	7.74	...	...	2.62	7.74	0.19	6.51	2.36	8.13	...	...
23209.68f	3.74	7.92	1.59	10.64	2.53	8.00	3.95	7.92	2.17	8.78	...	...
23221.55f	4.62	7.74	0.82	10.13	0.84	7.82	3.17	7.36	...	...	...	...
23228.58f	0.67	7.15	...	...	1.09	7.74	3.88	7.61	0.52	8.13	...	...
23229.64f	1.72	7.74	...	...	2.15	7.91	3.94	7.76	1.58	8.84	...	...
23232.60f	4.68	7.66	11.87	9.99	...	...	...	...	1.97	8.67	...	...
23234.57f	1.16	7.48	1.20	10.48	0.31	7.29	3.55	7.44	1.37	8.73	...	...
23237.54f	4.13	7.92	4.17	11.12	3.28	7.25	0.19	6.58	1.78	8.96	...	...
23253.54f	3.65	7.83	7.53	11.29	2.33	7.82	3.55	7.44	2.37	8.57	...	...

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION A						SECTION B					
	V Cen	Phase	Mag.	U Nor	Phase	Mag.	R TrA	Phase	Mag.	S TrA	Phase	Mag.
23283.52f	0.66	6.99	12.22	9.99	1.81	7.91	1.91	7.20	1.53	8.73		
23533.72f	3.63	7.83	9.57	10.86	1.20	8.00	5.49	7.20	0.03	7.83		
23566.72f	3.67	7.92	...	...	0.31	7.22	0.55	6.66	2.21	8.51		
23575.67f	1.63	7.66	0.95	10.08	2.48	8.00	3.17	7.36	0.88	8.67		
23647.52f	2.06	7.74	9.58	10.98	3.15	7.56	5.47	7.20	0.82	8.51		
23902.78z	4.59	7.83	11.99	9.83	0.83	7.91	1.46	7.12	1.82	8.89		
23918.70z	4.03	7.92	2.63	10.98	3.19	7.03	4.74	7.76	2.33	8.62		
23941.70z	5.05	7.15	0.34	10.24	...	...	2.44	7.28	2.21	8.73		
23961.58z	2.95	7.74	7.58	11.26	2.01	7.91	3.35	7.36	1.54	8.78		
23972.56z	...	...	5.91	11.33	2.82	7.48	1.68	7.12	2.25	8.73		
23996.53z	4.94	7.66	4.60	11.33	3.07	7.40	0.36	6.66	0.54	8.46		
24025.51z	0.96	7.74	8.29	11.19	1.54	7.82	4.04	7.92	1.27	8.67		
24245.82z	1.50	7.48	1.04	10.59	1.55	7.82	3.03	7.28	0.70	8.73		
24294.70z	0.94	7.30	11.99	10.08	2.98	7.36	1.32	6.96	0.78	8.40		
24327.63z	0.90	7.57	6.99	11.36	2.02	8.26	2.63	7.28	0.32	8.13		
24353.56z	...	...	7.63	11.26	0.83	8.00	3.27	7.68	0.57	8.51		
24355.56z	1.36	7.66	9.63	10.86	2.83	7.91	...	...	...	...		
24359.50z	5.30	6.99	0.93	10.13	3.38	7.25	2.88	7.36	1.37	8.73		
24375.50z	4.82	7.74	4.29	10.98	2.44	8.00	6.24	6.58	1.96	8.84		
24621.72z	3.81	7.83	10.30	10.76	1.24	7.82	...	...	1.62	8.73		
24641.79z	1.90	7.66	5.08	11.16	...	...	0.61	6.96	1.14	8.67		
24733.51z	0.22	7.07	8.30	11.19	1.18	8.00	3.80	7.76	2.43	8.51		
25328.51z	1.87	7.83	9.10	11.19	3.06	7.56	4.39	7.76	2.12	8.84		
25382.48z	0.90	7.48	12.50	9.91	2.80	7.91	1.45	7.04	2.15	8.67		
25440.28z	3.76	7.92	7.09	11.36	...	...	2.33	7.20	0.88	8.40		

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION A						SECTION B					
	YZ Sgr Phase	WZ Sgr Phase	WZ Sgr Mag.	AP Sgr Phase	AP Sgr Mag.	XX Sgr Phase	XX Sgr Mag.	U Sgr Phase	U Sgr Mag.	U Sgr Phase	U Sgr Mag.	
14862.62f	...	3.48	9.18	4.71	7.47	2.84	10.69	2.22	8.42			
14904.57f	6.72	8.51	1.73	8.63	1.14	8.05	6.25	9.41	3.70	8.80		
15148.73f	2.50	8.67	5.57	9.66	2.51	8.31	6.28	9.34	5.04	9.11		
15632.70f	4.34	8.79	18.13	10.06	2.06	8.05	4.80	10.86	4.55	9.03		
15634.57f	1.12	8.38	10.77	10.22	2.77	8.25	3.88	10.86	5.25	8.88		
15872.81f	0.54	8.32	8.68	10.06	3.27	8.25	4.42	10.96	0.67	8.01		
15885.83f	4.00	8.75	21.70	8.04	1.12	7.85	4.59	10.86	0.20	7.91		
15897.70f	6.32	8.59	11.73	10.16	2.87	8.18	3.62	10.86	5.33	9.19		
15933.68f	4.09	8.83	4.01	9.37	3.45	8.31	1.05	9.47	0.84	8.01		
15934.65f	5.06	8.79	4.98	9.37	4.42	7.98	2.02	10.32	1.81	8.50		
15940.64f	1.49	8.45	10.97	10.16	...	...	1.59	9.93	1.04	8.27		
16023.57f	8.00	8.25	6.51	9.66	2.29	8.25	1.00	9.41	3.04	8.72		
16241.73f	6.44	8.45	6.20	9.57	2.94	8.31	0.74	9.47	5.37	9.19		
16253.71f	...	...	18.18	10.16	4.80	7.56	6.29	9.28	3.86	8.88		
16297.69f	5.08	8.79	18.46	10.11	3.27	8.31	5.30	10.64	0.62	8.10		
16311.63f	9.46	8.17	10.55	10.22	2.04	8.18	6.39	9.28	1.07	8.35		
16319.54f	7.82	8.34	18.46	9.96	4.89	7.51	1.45	10.08	2.24	8.72		
16359.61f	0.13	8.10	14.84	10.42	4.49	7.92	2.98	10.80	...	...		
16376.62f	7.58	8.38	10.00	10.06	1.27	8.05	0.72	9.28	5.36	8.88		
16593.79f	5.03	8.79	8.70	9.96	0.94	7.72	5.89	10.37	6.69	8.50		
16608.89f	1.02	8.40	1.95	8.63	0.87	7.85	1.71	10.23	1.56	8.58		
16636.77f	0.24	7.96	7.98	9.77	3.46	8.25	3.90	10.80	2.46	8.58		
16650.72f	4.64	8.83	0.08	8.04	2.23	8.25	5.00	10.86	2.92	8.88		
16663.80f	8.17	8.32	13.16	10.37	0.14	7.56	5.23	10.80	2.51	8.65		

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	YZ Sgr			WZ Sgr			AP Sgr			XXX Sgr			U Sgr		
	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase
16697.67f	3.83	8.59	3.34	8.81	3.66	8.44	0.55	9.28	2.65	8.72					
16943.84f	1.61	8.45	9.19	10.11	1.98	8.18	2.60	10.37	6.00	8.72					
16968.80f	7.47	8.36	12.30	10.32	1.65	8.05	1.86	10.23	3.99	9.11					
16979.77f	8.88	8.10	1.42	8.45	2.50	8.31	6.41	9.21	1.47	8.42					
17004.65f	5.10	8.79	4.45	9.28	2.09	8.05	5.59	10.64	6.11	8.65					
17009.77f	0.67	8.38	9.57	10.22	2.15	8.18	4.29	10.86	4.49	9.19					
17032.77f	4.56	8.83	10.73	10.32	4.92	7.56	1.59	10.23	0.51	8.01					
17076.67f	0.70	8.38	10.93	10.22	3.30	8.25	0.52	9.34	3.94	9.03					
17077.65f	...	...	11.91	10.22	4.28	8.05	1.50	9.83	4.92	9.03					
17105.61f	0.98	8.42	18.02	10.22	1.89	7.92	3.76	10.86	5.90	8.65					
17335.80f	1.89	8.55	7.89	9.66	4.46	7.85	2.68	10.52	0.01	8.20					
17360.72	7.71	8.38	10.96	10.16	4.09	8.25	1.90	10.32	4.70	9.11					
17384.72f	3.05	8.67	13.12	10.32	2.80	8.31	0.21	9.28	1.72	8.50					
17403.72f	2.94	8.55	10.27	10.11	1.57	7.85	6.36	9.34	0.49	8.20					
17447.57f	8.58	8.34	10.42	10.16	4.96	7.47	5.24	10.86	3.87	9.07					
17465.56f	7.46	8.36	6.57	9.57	2.71	8.25	3.96	10.86	1.62	8.58					
17495.54f	8.78	8.17	14.70	10.42	2.34	8.18	1.81	9.93	4.62	9.19					
17703.90f	6.97	8.45	4.58	9.28	3.32	8.44	4.60	10.86	3.89	9.11					
17758.72f	...	...	5.71	9.77	2.50	8.18	1.60	10.03	4.75	9.19					
17774.72f	1.37	8.51	9.86	10.06	3.33	8.31	4.75	10.86	0.52	8.20					
17787.64f	...	...	0.93	8.27	1.07	7.77	4.82	10.86	6.69	8.27					
17813.55f	1.99	8.45	5.00	9.28	1.69	7.98	5.04	10.86	5.62	8.88					
17820.55f	8.99	8.10	12.00	10.37	3.63	8.31	5.61	10.74	5.88	8.72					
18027.89f	6.16	8.59	0.86	8.45	3.59	8.25	0.95	9.62	4.12	9.03					

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION A						SECTION B					
	YZ Sgr		WZ Sgr		AP Sgr		XX Sgr		U Sgr		Phase Mag.	
Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase
18042.86f	2.02	8.43	15.83	10.27	3.39	8.25	3.07	10.64	5.60	8.88		
18069.86f	0.36	8.03	20.98	8.45	0.04	7.47	4.38	10.86	5.62	9.03		
18111.78f	...	...	19.21	10.11	1.49	7.98	1.33	9.73	0.33	8.10		
18148.66f	2.74	8.51	12.39	10.32	2.97	8.25	6.08	10.42	3.48	9.03		
18156.61f	1.13	8.42	20.34	9.28	0.80	7.92	1.19	9.93	4.69	9.11		
18199.56f	5.87	8.63	19.60	10.06	3.28	8.25	5.59	10.74	0.43	8.10		
18209.53f	6.29	8.55	7.72	9.66	3.14	8.31	2.71	10.47	3.65	8.95		
18438.84f	6.32	8.55	18.56	10.11	4.83	7.56	0.75	9.62	3.63	8.80		
18453.80f	2.18	8.55	11.67	10.22	4.62	7.56	2.86	10.64	5.10	9.03		
18472.69f	1.96	8.45	8.71	9.96	3.27	8.25	2.48	10.58	3.76	8.88		
18499.71f	0.32	8.10	13.88	10.42	5.00	7.47	3.80	10.91	3.80	8.95		
18500.72f	1.33	8.45	14.89	10.42	0.96	7.92	4.81	10.86	4.81	9.11		
18501.59f	2.20	8.55	15.76	10.37	1.83	8.05	5.68	10.52	5.68	8.84		
18506.68f	7.29	8.43	20.85	8.63	1.86	8.18	4.35	10.91	4.02	8.88		
18531.61f	3.56	8.75	2.09	8.63	1.50	7.92	3.58	10.74	1.97	8.42		
18565.53f	8.82	8.32	14.16	10.37	0.01	7.51	5.38	10.80	2.17	8.65		
18820.82f	6.18	8.55	7.28	9.77	2.39	8.18	3.70	10.91	1.15	8.10		
18821.79f	7.15	8.45	8.25	9.86	3.36	8.31	4.67	10.96	2.12	8.42		
18832.78f	8.58	8.17	19.24	9.96	4.24	8.18	2.81	10.52	6.37	8.72		
18848.63f	5.33	8.75	13.24	10.37	4.91	7.47	5.81	10.47	1.98	8.50		
18855.75f	2.89	8.59	20.36	9.18	1.92	8.25	0.08	9.28	2.36	8.65		
18859.70f	6.84	8.55	2.47	8.81	0.81	7.92	4.03	10.80	6.31	8.27		
18884.63f	3.11	8.51	5.55	9.77	0.45	7.85	3.26	10.69	4.26	9.03		
18919.55f	9.37	8.32	18.62	10.16	5.02	7.56	6.06	9.47	5.45	9.19		

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION A				SECTION B					
	YZ Sgr	WZ Sgr	AP Sgr	XX Sgr	U Sgr	Phase	Mag.	Phase	Mag.	
19204.74f	7.97	8.34	19.79	10.06	1.90	8.11	2.16	10.32	0.61	8.01
19233.66f	8.23	8.18	5.02	9.57	0.47	7.72	5.38	10.69	2.55	8.62
19241.61f	6.63	8.55	12.97	10.37	3.36	8.38	0.49	9.41	3.76	8.84
19264.60f	0.96	8.34	14.11	10.42	1.06	8.05	4.20	10.96	6.51	8.20
19300.50f	8.20	8.34	6.32	9.77	1.55	8.05	1.56	9.88	1.94	8.35
19311.53f	0.13	8.10	17.35	10.16	2.46	8.05	6.16	9.41	6.23	8.65
19332.72f	1.59	8.45	20.06	9.77	1.10	7.98	2.50	10.64	4.84	8.95
19342.85f	2.17	8.49	8.34	10.11	1.11	7.85	6.21	9.62	1.48	8.42
19345.81f	5.13	8.75	11.30	10.42	4.07	7.98	2.75	10.52	4.44	9.03
19361.72f	1.93	8.49	5.37	9.66	4.81	7.47	5.81	10.52	0.11	8.10
19362.69f	2.90	8.55	6.34	9.77	0.72	7.98	0.35	9.28	1.08	8.01
19372.70f	3.36	8.59	16.35	10.22	0.61	7.64	3.94	10.96	4.35	9.03
19383.71f	5.26	8.79	15.51	10.48	1.36	7.98	5.68	10.58	5.12	9.11
19601.64f	3.64	8.79	1.59	8.63	4.26	7.92	0.76	9.62	6.31	8.27
19603.65f	5.65	8.71	3.60	9.18	1.21	7.85	2.77	10.52	1.57	8.42
19604.65f	6.55	8.55	4.50	9.28	2.11	8.11	3.67	10.86	2.47	8.58
19632.58f	5.92	8.67	10.68	10.22	4.85	7.47	6.00	9.93	3.52	8.72
19645.63f	9.41	8.02	1.89	8.72	2.73	8.31	6.20	9.34	3.08	8.72
19650.65f	4.88	8.75	6.91	9.77	2.69	8.18	4.80	11.02	1.36	8.35
19657.56f	2.24	8.55	13.82	10.58	4.54	7.60	.....	.....	1.52	8.15
19889.88f	5.28	8.79	5.81	9.77	4.19	7.92	6.33	9.28	4.52	9.11
19898.87f	4.72	8.75	14.80	10.48	3.06	8.31	2.47	10.58	0.02	7.91
19912.80f	9.10	8.10	6.89	9.77	1.82	8.18	3.55	10.91	0.46	8.01
19922.82f	0.01	8.10	16.91	10.22	1.72	8.05	0.72	9.47	3.73	9.03

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Contd.*

J. D. and Telescope	SECTION A						U Sgr Phase Mag.			
	YZ Sgr Phase Mag.	WZ Sgr Phase Mag.	AP Sgr Phase Mag.	XX Sgr Phase Mag.	XX Sgr Phase Mag.	XX Sgr Phase Mag.				
19931.66f	8.85	8.10	3.90	9.18	0.44	7.51	3.14	10.58	5.83	9.03
19942.76f	0.84	8.38	15.00	10.58	1.43	7.92	1.39	10.13	3.44	8.72
19947.72f	5.80	8.59	19.96	9.77	...	...	6.35	9.28	1.65	8.50
19950.71f	8.79	8.10	1.10	8.45	4.32	7.77	2.92	10.58	4.64	9.03
19951.72f	0.25	8.09	2.11	8.81	0.27	7.47	...	...	5.65	8.80
19959.58f	8.11	8.34	9.97	10.11	3.07	8.18	5.36	10.64	0.02	8.20
19961.60f	0.58	8.18	11.99	10.22	0.04	7.43	0.96	9.73	2.04	8.65
19973.51f	2.93	8.55	2.05	8.72	1.83	7.98	0.02	9.21	0.46	7.91
19977.67f	7.09	8.45	6.21	9.77	0.93	7.92	4.18	11.02	4.62	9.03
19985.52f	5.39	8.79	14.06	10.58	3.72	8.18	5.61	10.86	5.73	8.95
19989.52f	9.39	8.10	18.06	10.16	2.67	8.11	3.18	10.64	2.98	8.72
20012.57f	3.78	8.63	19.27	10.11	0.42	7.47	0.53	9.41	5.80	8.95
20013.56f	4.77	8.83	20.26	9.66	1.41	7.98	...	...	0.04	7.96
20044.56f	7.11	8.43	7.56	9.86	2.07	8.18	0.42	9.41	4.06	8.88
20297.67f	2.29	8.55	20.35	9.37	2.27	7.98	2.97	10.64	0.87	8.01
20306.74f	1.80	8.47	7.57	9.86	1.22	7.98	5.61	10.64	3.19	8.72
20307.56f	2.62	8.59	8.39	10.16	2.04	7.98	0.01	9.34	...	...
20328.60f	4.56	8.83	7.58	9.86	2.85	8.25	1.78	10.27	4.82	9.19
20329.69f	5.65	8.79	8.67	10.11	3.94	8.18	2.87	10.69	5.91	9.03
20330.67f	6.63	8.51	9.65	10.16	4.92	7.47	3.85	10.86	0.14	7.91
20337.66f	4.06	8.71	16.64	10.58	1.79	7.92	4.41	10.96	0.39	7.91
20338.58f	4.98	8.83	17.56	10.37	2.71	8.25	5.33	10.80	1.31	8.35
20354.58f	1.88	8.47	11.72	10.37	3.54	8.31	2.06	10.32	3.82	9.03
20366.58f	4.33	8.75	1.87	8.54	0.37	7.56	1.21	9.62	2.33	8.50

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION A						SECTION B					
	YZ Sgr			WZ Sgr			AP Sgr			XX Sgr		
Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase
20367.59f	5.34	8.75	2.88	8.99	1.38	7.98	2.22	10.52	3.34	8.65		
20372.62f	0.81	8.10	7.91	9.86	1.35	7.98	0.83	9.47	1.62	8.20		
20384.53f	3.17	8.67	19.82	9.86	3.14	8.25	6.31	9.34	0.04	8.10		
20394.58f	3.67	8.79	8.02	9.77	3.07	8.18	3.51	10.80	3.35	8.80		
20414.54f	4.52	8.75	6.13	9.47	2.80	8.25	4.20	10.86	3.07	8.88		
20610.86f	9.77	8.10	5.82	9.66	1.84	8.18	...	...	3.78	8.95		
20652.77f	3.92	8.63	4.04	9.18	3.30	8.31	4.73	10.86	5.23	9.03		
20667.77f	9.37	8.18	19.04	9.96	...	...	0.46	9.34	0.00	8.20		
20670.66f	2.70	8.51	0.08	8.27	...	...	3.35	10.74	2.89	8.72		
20681.71f	4.20	8.75	11.13	10.32	1.89	8.25	1.55	9.78	0.45	8.20		
20688.71f	1.65	8.40	18.13	10.11	3.83	8.25	2.13	10.52	0.70	8.01		
20691.62f	4.56	8.79	21.04	8.72	1.68	7.98	5.04	10.96	3.61	9.03		
20695.66f	8.90	8.18	3.24	9.18	0.67	7.85	2.66	10.52	0.91	8.20		
20719.61f	3.89	8.79	5.34	9.28	4.38	8.05	0.91	9.52	4.62	9.07		
20747.52f	3.14	8.55	11.40	10.42	1.95	7.98	3.12	10.64	5.55	9.03		
20752.48f	8.10	8.38	16.36	10.37	1.85	8.25	1.65	10.03	3.77	8.88		
20769.48f	5.99	8.63	11.51	10.42	3.67	8.18	5.81	10.52	0.53	8.01		
21006.79f	4.47	8.87	8.50	9.96	3.25	8.31	5.42	10.80	1.77	8.42		
21007.78f	5.46	8.83	9.49	10.11	4.24	7.92	6.41	9.28	2.76	8.50		
21009.83f	7.51	8.40	11.54	10.42	1.23	7.98	2.03	10.23	4.81	9.19		
21011.76f	9.44	8.03	13.47	10.58	3.17	8.31	3.96	10.91	0.00	8.10		
21023.74f	2.32	8.45	3.61	9.18	5.03	7.56	3.10	10.58	5.23	8.95		
21048.68f	8.15	8.34	6.70	9.66	4.64	7.47	2.34	10.47	3.19	8.88		
21062.63f	3.00	8.55	20.65	8.90	3.45	8.18	3.44	10.86	3.65	8.95		

SHAPLEY

## TWENTY-FIVE SOUTHERN CEPHEID VARIABLE STARS

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TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Contd.*

J. D. and Telescope	SECTION A						SECTION B					
	YZ Sgr		WZ Sgr		AP Sgr		XX Sgr		U Sgr		Phase Mag.	
Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase
21066.63f	7.00	8.51	2.80	9.18	2.39	8.18	1.02	9.78	0.91	8.20	...	...
21079.59f	0.85	8.38	...	...	0.18	7.68	1.13	9.47	0.38	8.20	...	...
21080.60f	1.86	8.42	16.77	10.16	1.19	8.05	2.14	10.47	1.39	8.50	...	...
21092.54f	4.25	8.79	6.86	9.77	3.01	8.31	1.23	9.73	6.58	8.50	...	...
21099.55f	1.70	8.55	13.87	10.53	4.96	7.47	1.81	10.32	6.85	8.31	...	...
21103.55f	5.70	8.67	17.87	10.22	3.91	8.31	5.81	10.52	4.10	9.03	...	...
21135.52f	9.01	8.10	6.15	9.77	0.47	7.56	5.66	10.64	2.35	8.65	...	...
21137.53f	1.47	8.45	8.16	9.66	2.48	8.11	1.25	9.62	4.36	9.03	...	...
21155.49f	0.32	8.10	...	...	0.21	7.72	6.36	9.47	2.08	8.46	...	...
21156.51f	1.34	8.38	5.29	9.66	1.23	7.98	0.96	9.73	3.10	8.72	...	...
21160.50f	5.33	8.75	9.28	10.06	0.16	7.56	4.95	10.74	0.35	8.20	...	...
21364.83f	9.05	8.18	16.98	10.37	2.16	8.05	3.70	10.96	2.33	8.42	...	...
21393.75f	9.31	8.10	2.21	8.81	0.73	7.81	0.50	9.34	4.27	9.03	...	...
21398.70f	4.74	8.75	7.16	9.66	0.63	7.92	5.50	10.69	2.47	8.65	...	...
21399.71f	...	...	...	...	1.64	8.25	...	...	...	...	...	...
21424.63f	1.98	8.59	11.24	10.42	1.27	8.05	5.68	10.58	1.43	8.58	...	...
21427.62f	4.97	8.79	14.23	10.42	4.26	7.85	2.25	10.52	4.42	9.11	...	...
21451.57f	...	...	...	...	2.91	8.38	...	...	...	...	...	...
21453.54f	...	...	...	...	4.88	7.64	...	...	...	...	...	...
21455.56f	...	...	...	...	1.85	8.18	...	...	...	...	...	...
21457.56f	6.25	8.59	0.48	8.27	3.85	8.31	0.07	9.41	0.63	8.20	...	...
21460.54f	...	...	...	...	1.77	8.18	...	...	...	...	...	...
21462.53f	...	...	...	...	3.76	8.38	...	...	...	...	...	...
21523.54f	...	...	...	...	4.07	8.18	...	...	...	...	...	...

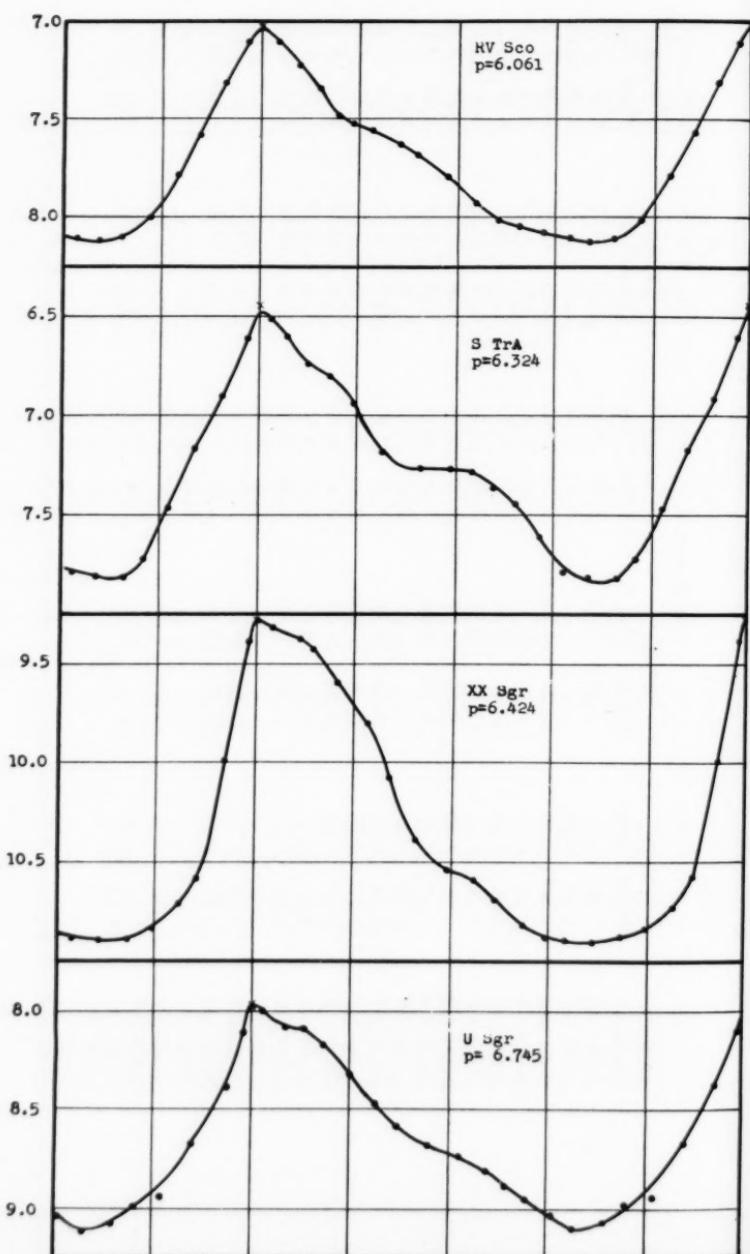


TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION A						SECTION B					
	YZ Sgr Phase	Mag.	WZ Sgr Phase	Mag.	AP Sgr Phase	Mag.	XX Sgr Phase	Mag.	U Sgr Phase	Mag.		
21788.63f	2.96	8.59	3.83	9.18	1.08	7.92	3.50	10.80	1.20	8.20		
21806.66f	1.88	8.55	0.02	8.27	3.94	8.26	2.26	10.52	5.74	9.11		
21817.56f	....	....	....	....	4.72	7.34	....	....	....	....		
21818.58f	....	....	....	....	0.68	7.51	....	....	....	....		
21819.56f	....	....	....	....	1.66	8.25	....	....	....	....		
21836.53f	....	....	....	....	3.46	8.38	....	....	....	....		
22135.68f	....	....	....	....	4.18	8.05	....	....	....	....		
22166.51f	8.26	8.34	10.31	10.16	....	....	2.35	10.64	1.36	8.20		
22194.56f	....	....	....	....	2.36	8.25	....	....	....	....		
22225.53f	0.41	8.10	3.78	9.28	2.98	8.44	3.55	10.91	6.42	8.50		
22516.60f	4.89	8.75	10.84	10.06	0.68	7.56	5.53	10.86	0.72	8.01		
23181.82f	1.39	8.38	20.63	8.81	3.28	8.44	2.62	10.52	4.94	9.19		
23194.75f	4.76	8.75	11.71	10.42	1.04	7.98	2.71	10.52	4.38	9.07		
23205.65f	6.11	8.67	0.77	8.45	....	....	0.76	9.28	1.79	8.35		
23206.69f	7.15	8.43	1.81	8.54	2.86	8.38	1.80	10.32	2.83	8.72		
23209.72f	0.63	8.32	4.84	9.57	0.83	7.98	4.83	10.91	5.86	8.72		
23222.72f	4.07	8.59	17.84	10.06	3.72	8.31	4.98	10.80	5.37	9.19		
23235.68f	7.48	8.38	8.95	9.96	1.50	8.05	5.09	10.86	4.84	9.03		
23247.66f	0.35	8.03	....	....	3.37	8.31	4.22	10.91	3.33	8.80		
23248.59f	1.28	8.40	0.00	7.97	4.30	7.92	5.15	10.69	4.26	8.95		
23253.61f	6.30	8.63	5.03	9.66	4.26	7.92	3.75	10.91	....	....		
23277.57f	1.60	8.38	7.14	9.96	2.93	8.25	2.01	10.47	6.26	8.58		
23306.51f	1.88	8.43	14.23	10.58	1.52	8.05	5.25	10.74	1.47	8.27		
23311.52f	6.89	8.51	19.25	9.86	1.47	8.05	3.84	10.86	6.48	8.27		

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION A

## TWENTY-FIVE SOUTHERN CEPHEID VARIABLE STARS

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TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION A												
J. D. and Telescope	YZ Sgr			WZ Sgr			AP Sgr			XX Sgr		
	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.
24404.53z	0.63	8.32	.....	.....	1.92	8.05	4.72	10.91	0.06	8.01	.....	.....
24432.53z	3.60	8.55	.....	.....	4.64	7.64	0.60	9.28	.....	.....	.....	.....
24731.64z	.....	.....	17.44	10.22	.....	.....	4.20	10.86	3.43	9.03	.....	.....
25035.67y	6.60	8.55	9.66	10.27	2.07	8.05	5.00	11.02	0.11	8.01	.....	.....
25335.60z	2.39	8.47	21.81	7.90	.....	.....	0.46	9.34	0.38	8.20	.....	.....
25389.60z	7.44	8.38	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
25413.76r	8.68	8.34	10.33	10.06	.....	.....	.....	.....	0.48	7.91	.....	.....
25443.66r	.....	.....	16.34	10.42	.....	.....	.....	.....	6.49	8.42	.....	.....
25449.67r	3.70	8.59	18.81	9.86	.....	.....	.....	.....	1.04	8.06	.....	.....
25801.70r	1.17	8.34	.....	.....	.....	.....	.....	.....	1.32	8.10	.....	.....
25808.72r	7.54	8.38	19.90	9.57	.....	.....	.....	.....	3.75	8.72	.....	.....
25824.64r	4.10	8.71	8.24	9.77	.....	.....	.....	.....	3.67	8.80	.....	.....
25875.52r	.....	.....	19.23	9.77	.....	.....	.....	.....	1.17	8.10	.....	.....
25889.51r	0.80	10.94	4.51	11.54	3.22	11.21	0.86	11.06	0.73	8.89	.....	.....
SECTION B												
J. D. and Telescope	Y Set			Z Set			RU Set			X Set		
	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.
14876.60f	2.31	11.20	7.28	12.10	11.57	11.73	4.11	10.81	2.55	9.74	.....	.....
14890.60f	5.97	11.66	8.38	11.92	5.88	11.21	1.32	11.27	1.86	9.59	.....	.....
15162.86f	.....	.....	.....	.....	2.38	11.02	.....	.....	.....	.....	.....	.....
15266.54f	.....	.....	.....	.....	7.58	11.69	.....	.....	.....	.....	.....	.....
15533.74f	.....	.....	.....	.....	18.73	10.72	.....	.....	.....	.....	.....	.....
15542.83f	.....	.....	2.62	10.86	8.12	11.58	2.86	11.78	0.62	9.04	.....	.....
15557.62f	0.80	10.94	4.51	11.54	3.22	11.21	0.86	11.06	0.73	8.89	.....	.....

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	Y Set			Z Set			RU Set			X Set			SS Set		
	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase
15558 68f	1.86	11.01		5.57	11.72		4.28	11.21	1.92	11.44	1.79	9.69			
15561 67f	4.85	11.69		8.56	11.92		7.27	11.69	0.71	11.00	1.11	9.29			
15571 71f							17.31	11.77							
15602 56f	4.38	11.60		10.74	11.29		18.07	11.32					1.61	9.69	
15631 56f							2.37	10.99							
15635 56f							3.30	11.01							
15872 85f							9.49	11.79							
15898 73f									2.83	11.71	1.84	9.79			
15903 83f	5.74	11.75		2.37	10.86		3.80	11.11	3.34	11.41	3.41	8.94			
15912 74f	4.31	11.57		1.28	11.29		6.10	11.47							
15934 74f									3.39	11.51	3.49	8.73			
15971 56f	1.08	10.94		5.59	11.86		5.53	11.04							
15993 54f	2.38	11.20		1.77	10.49		5.81	11.27	0.18	10.81	3.45	8.76			
15995 61f	4.45	11.60		3.84	11.38		7.88	11.73	2.25	11.51	1.85	9.59			
16033 52f	1.00	10.80		3.05	10.95		6.40	11.67	2.38	11.74	3.04	9.49			
16226 81f	8.14	11.17		2.68	10.95		2.73	10.97	2.56	11.71	1.76	9.54			
16230 81f	1.80	10.94		6.81	11.92		6.73	11.47	2.36	11.78	2.09	9.87			
16241 77f							17.69	11.69							
16253 76f							9.98	11.83							
16284 84f	4.12	11.63		9.23	11.72		1.67	10.72	1.82	11.19	1.05	9.19			
16292 77f	1.71	10.96		4.26	11.54		9.60	11.77	1.35	11.23	1.64	9.54			
16310 64f							7.77	11.67							
16312 76f							9.89	11.75					3.27	9.04	
16338 66f	6.14	11.75		11.35	11.12		15.99	11.73	0.96	11.00	3.38	8.99			
16340 65f	8.23	11.23		0.53	10.22		18.08	11.21	3.05	11.51	1.79	9.87			

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

## TWENTY-FIVE SOUTHERN CEPHEID VARIABLE STARS

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## SECTION A

J. D. and Telescope	Y Set Phase	Mag.	Z Set			RU Sct			X Set			SS Set		
			Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.
16361.58f	.....	.....	.....	.....	.....	19.32	10.61	.....	.....	.....	.....	.....	.....	.....
16376.58f	.....	.....	.....	.....	14.62	11.83	2.75	11.58	2.68	9.96	.....	.....	.....	.....
16583.83f	3.21	11.31	5.01	10.95	5.21	11.27	0.16	11.25	.....	.....	.....	.....	.....	.....
16593.84f	.....	.....	.....	.....	2.70	10.83	.....	.....	.....	.....	.....	.....	.....	.....
16620.71f	.....	.....	.....	.....	2.75	11.06	1.90	11.25	2.89	9.45	.....	.....	.....	.....
16620.76f	9.12	10.99	9.71	11.72	11.71	11.71	.....	.....	.....	.....	3.17	9.24	.....	.....
16635.72f	3.40	11.51	11.77	10.77	17.71	11.71	.....	.....	.....	.....	.....	.....	.....	.....
16636.81f	.....	.....	.....	.....	18.80	10.99	.....	.....	.....	.....	.....	.....	.....	.....
16639.71f	7.39	11.45	2.85	10.86	2.00	10.96	4.05	10.75	3.49	8.99	.....	.....	.....	.....
16649.74f	7.07	11.51	12.88	10.22	12.03	11.83	1.49	11.23	2.50	9.96	.....	.....	.....	.....
16652.80f	.....	.....	.....	.....	15.09	11.83	.....	.....	.....	.....	.....	.....	.....	.....
16663.75f	.....	.....	.....	.....	6.34	11.37	.....	.....	.....	.....	.....	.....	.....	.....
16669.79f	6.44	11.72	7.13	12.01	12.38	11.81	0.55	10.92	0.53	8.94	.....	.....	.....	.....
16697.63f	.....	.....	.....	.....	0.83	10.83	.....	.....	.....	.....	.....	.....	.....	.....
16711.53f	.....	.....	.....	.....	14.73	11.73	.....	.....	.....	.....	.....	.....	.....	.....
16753.53f	7.45	11.51	0.56	10.40	17.34	11.58	0.33	10.81	3.50	8.94	.....	.....	.....	.....
16766.51f	10.09	10.67	0.64	10.22	10.62	11.73	0.71	10.86	1.80	9.79	.....	.....	.....	.....
16943.89f	.....	.....	.....	.....	10.73	11.83	.....	.....	.....	.....	.....	.....	.....	.....
16975.72f	.....	.....	.....	.....	3.17	11.11	.....	.....	.....	.....	.....	.....	.....	.....
16976.79f	3.20	11.48	4.47	11.72	4.24	11.09	1.09	11.19	2.82	9.69	.....	.....	.....	.....
16991.81f	.....	.....	.....	.....	19.26	10.50	.....	.....	.....	.....	.....	.....	.....	.....
17000.83f	6.56	11.66	2.73	11.04	8.58	11.63	4.14	10.58	1.16	9.49	.....	.....	.....	.....
17004.70f	.....	.....	.....	.....	12.45	11.83	.....	.....	.....	.....	.....	.....	.....	.....
17010.69f	6.08	11.90	12.59	10.40	18.44	11.01	1.41	11.21	0.01	8.84	.....	.....	.....	.....
17018.67f	3.71	11.60	7.66	11.95	6.73	11.32	0.99	11.19	0.64	8.73	.....	.....	.....	.....

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	Y Set Phase	Mag.	Z Set			RU Set			X Set			SS Set		
			Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.
17032.73f	.....	.....	.....	.....	.....	.....	1.09	10.72	.....	.....	.....	.....	.....	.....
17049.67f	.....	.....	.....	.....	.....	.....	18.03	11.47	.....	.....	.....	.....	.....	.....
17053.58f	7.74	11.48	4.01	11.72	2.38	10.61	2.46	11.58	.....	.....	.....	.....	.....	.....
17053.72f	0.06	10.55	4.11	11.38	15.38	11.77	2.86	11.78	0.97	8.99	.....	.....	.....	.....
17066.72f	9.95	10.67	1.10	10.59	5.58	11.42	0.16	11.04	3.52	8.89	.....	.....	.....	.....
17076.61f	0.65	10.80	1.94	10.77	6.62	11.67	1.20	11.19	0.89	9.09	.....	.....	.....	.....
17077.65f	.....	.....	.....	.....	.....	.....	14.84	11.77	.....	.....	.....	.....	.....	.....
17105.57f	9.93	10.80	6.30	11.80	16.89	11.65	1.78	11.23	1.49	9.64	.....	.....	.....	.....
17107.62f	6.85	11.66	8.44	11.86	5.44	11.21	0.34	10.92	0.06	8.67	.....	.....	.....	.....
17135.56f	0.64	10.67	5.19	11.72	18.45	11.08	1.71	11.38	3.11	9.29	.....	.....	.....	.....
17325.84f	8.23	11.15	2.54	10.68	8.31	11.67	0.28	10.81	0.66	8.99	.....	.....	.....	.....
17374.79f	3.83	11.60	8.48	11.83	14.25	11.73	2.02	11.31	2.93	9.59	.....	.....	.....	.....
17380.73f	7.49	11.57	9.58	11.54	8.56	11.73	3.44	11.41	2.25	9.87	.....	.....	.....	.....
17394.74f	3.05	11.25	7.80	12.10	6.09	11.42	2.58	11.71	2.46	9.87	.....	.....	.....	.....
17431.66f	8.05	11.17	12.80	10.13	11.09	11.73	3.38	11.44	0.12	8.64	.....	.....	.....	.....
17436.66f	6.65	11.75	8.84	11.89	0.33	10.61	3.92	10.81	1.72	9.87	.....	.....	.....	.....
17445.60f	7.07	11.45	1.98	10.68	2.25	10.94	2.91	11.64	1.36	9.49	.....	.....	.....	.....
17683.87f	9.58	10.99	7.15	11.89	6.73	11.53	0.61	10.81	1.19	9.59	.....	.....	.....	.....
17727.75f	6.33	11.75	1.34	10.40	13.82	11.77	3.60	11.44	0.93	9.14	.....	.....	.....	.....
17734.84f	2.75	11.17	5.64	11.95	3.85	11.21	0.94	11.15	0.00	8.67	.....	.....	.....	.....
17803.65f	2.26	11.10	2.59	10.86	13.70	11.79	2.40	11.64	2.50	9.87	.....	.....	.....	.....
17813.50f	5.39	11.69	5.72	11.80	16.83	11.71	1.33	11.23	1.96	9.79	.....	.....	.....	.....
17816.63f	4.15	11.54	12.66	10.22	6.74	11.58	0.90	11.08	0.61	8.94	.....	.....	.....	.....
18042.90f	2.63	11.20	0.90	10.68	7.20	11.53	2.97	11.58	0.08	8.73	.....	.....	.....	.....

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	Y Set			Z Set			RU Set			X Set			SS Set		
	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase
18097.85f	7.39	11.45	3.10	11.29	2.60	10.83	1.28	11.15	0.50	8.89					
18110.78f	9.98	10.80	3.13	11.20	15.53	11.83	1.62	11.51	2.41	9.96					
18132.66f	0.83	10.80	12.11	10.49	17.71	11.58	2.51	11.78	2.27	9.91					
18155.69f	3.18	11.42	9.33	11.86	1.35	10.83	0.35	10.75	3.27	8.99					
18158.53f	6.02	11.72	12.17	10.59	4.19	11.06	3.19	11.44	2.44	9.87					
18158.58f	6.07	11.72	12.22	10.31	4.24	11.09	3.54	11.31	2.49	9.87					
18202.61f	8.74	11.15	4.65	11.54	8.88	11.67	1.09	11.04	2.46	9.91					
18427.84f	6.46	11.66	10.55	11.29	17.45	11.63	3.82	10.81	0.08	8.89					
18441.75f	10.02	10.80	11.56	10.86	....	....	0.94	11.06	2.98	9.59					
18467.80f	5.05	11.66	11.80	10.59	18.01	11.08	1.80	11.19	3.33	9.09					
18477.80f	4.71	11.63	8.90	11.89	8.32	11.67	3.41	11.38	2.31	9.96					
18533.55f	8.75	11.15	0.14	10.22	4.98	11.08	0.39	10.86	3.00	9.29					
18534.63f	9.83	10.94	1.22	10.31	6.06	11.27	1.47	11.25	0.41	8.94					
18539.64f	4.50	11.75	6.23	11.80	11.07	11.77	2.28	11.58	1.74	9.59					
18541.50f	6.36	11.69	8.09	12.10	12.93	11.77	4.14	10.70	3.60	8.67					
18561.56f	5.74	11.69	2.35	10.86	13.29	11.69	3.21	11.38	1.64	9.64					
18569.55f	3.39	11.54	10.34	11.12	1.59	10.72	2.80	11.64	2.29	9.87					
18574.53f	7.49	11.51	2.42	10.86	6.57	11.42	3.58	11.23	3.59	8.67					
18582.84f	7.48	11.45	4.59	11.54	17.52	11.63	3.21	11.64	1.26	9.49					
18594.83f	10.13	10.80	4.68	11.63	10.81	11.83	3.61	11.23	3.24	9.49					
18849.76f	4.38	11.63	6.71	11.80	6.05	11.47	1.74	11.23	3.49	8.73					
18864.76f	9.04	11.12	8.81	11.83	1.35	10.72	4.15	10.70	0.13	8.73					
18870.70f	4.64	11.69	1.85	10.59	7.29	11.63	1.69	11.27	2.40	9.96					
18911.62f	4.19	11.69	4.06	11.46	8.82	11.67	0.63	11.00	2.93	9.69					
18918.57f	0.80	10.80	11.01	10.95	....	....	3.39	11.31	2.54	9.96					

TWENTY-FIVE SOUTHERN CEPHEID VARIABLE STARS

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	Y Set			Z Set			RU Set			X Set			SS Set			
	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	
19234.73f	6.72	11.60	4.63	11.54	16.78	11.73	0.50	10.81	2.98	9.59						
19290.59f	0.53	10.67	8.88	11.89	.....	.....	1.78	11.27	0.10	8.61						
19310.52f	0.12	10.55	3.01	11.20	13.79	11.75	0.72	11.19	1.68	9.87						
19566.71f	.....	.....	0.16	10.49	.....	.....	0.83	11.15	0.88	9.19						
19603.70f	.....	.....	12.35	10.40	.....	.....	0.04	10.70	1.16	9.59						
19606.64f	6.34	11.72	2.39	10.86	14.46	11.75	2.98	11.64	0.43	8.73						
19616.67f	6.02	11.75	2.42	10.68	4.79	11.11	0.42	10.81	3.12	9.49						
19631.62f	0.29	10.80	1.57	10.68	0.05	10.50	.....	.....	3.38	8.99						
19916.84f	.....	.....	2.95	11.20	.....	.....	2.53	11.85	2.25	9.96						
19921.84f	0.95	10.94	7.95	11.89	.....	.....	3.33	11.71	3.58	8.79						
19933.82f	2.59	11.20	7.03	11.86	6.80	11.32	2.71	11.98	0.87	9.09						
19942.81f	1.24	11.01	3.11	11.29	17.79	11.65	3.31	11.78	2.52	9.87						
19972.75f	0.16	10.67	7.25	12.01	6.34	11.63	3.86	10.81	3.09	9.69						
20069.52f	.....	.....	0.81	10.68	.....	.....	4.08	10.81	0.74	9.14						
20341.69f	7.15	11.60	2.04	10.86	1.04	10.83	3.37	11.38	1.24	9.69						
20357.64f	.....	.....	5.09	11.72	.....	.....	2.53	11.58	2.51	9.79						
20361.62f	6.39	11.69	.....	.....	1.28	10.83	2.31	11.85	2.82	9.87						
20363.54f	8.31	11.12	10.99	11.12	3.20	11.06	0.04	10.58	1.07	9.39						
20387.58f	1.33	10.96	9.23	11.80	7.54	11.58	3.09	11.71	3.08	9.59						
20391.57f	5.32	11.72	0.31	10.22	11.33	11.83	2.88	11.64	3.40	8.76						
20398.58f	1.99	11.17	7.32	11.86	18.54	10.94	1.49	11.31	3.07	9.59						
20444.63f	6.67	11.69	1.77	10.49	5.50	11.21	1.36	11.19	1.39	9.59						
20670.66f	5.19	11.75	8.47	11.92	14.87	11.83	0.70	10.81	3.48	8.94						
20682.77f	6.96	11.57	.....	.....	.....	.....	0.22	10.81	0.90	9.09						
20691.73f	.....	.....	3.73	11.72	.....	.....	0.78	11.04	.....	.....						

SHAPLEY

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION A						SECTION B					
	Y Set		Z Set		RU Set		X Set		SS Set		Phase Mag.	
Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Mag.
20708.63f	1.80	11.01	7.73	11.95	.....	.....	0.89	11.04	1.06	9.19		
20719.61f	.....	.....	5.81	11.89	4.73	11.21	3.47	11.27	1.03	9.19		
20752.49f	4.29	11.75	12.89	10.22	17.91	11.32	2.77	11.78	0.87	9.14		
21023.74f	6.67	11.78	0.30	10.22	.....	.....	1.15	11.15	0.45	8.73		
21038.67f	0.91	10.96	2.33	11.04	.....	.....	3.48	11.27	0.70	9.09		
21047.76f	10.00	10.94	11.42	11.12	.....	.....	4.18	10.70	2.45	9.96		
21062.68f	.....	.....	0.53	10.49	12.96	11.77	2.30	11.71	2.68	9.87		
21064.67f	6.23	11.81	2.52	10.77	14.95	11.83	0.10	10.75	1.00	9.29		
21066.68f	8.24	11.10	4.53	11.72	16.96	11.63	2.11	11.71	3.01	9.79		
21069.68f	0.90	10.67	7.53	12.04	0.26	10.50	0.91	11.12	2.34	9.87		
21073.63f	4.85	11.75	11.48	11.12	4.21	11.27	0.66	11.00	2.62	9.79		
21079.56f	0.47	10.67	4.54	11.54	10.17	11.79	2.42	11.58	1.24	9.29		
21080.60f	1.48	11.01	5.55	11.80	11.18	11.79	3.43	11.27	2.25	9.87		
21092.54f	3.08	11.48	4.59	11.63	3.43	11.08	2.78	11.58	3.17	9.39		
21098.58f	9.12	11.12	10.63	11.20	9.47	11.67	0.42	10.81	1.87	9.87		
21099.55f	10.09	10.67	11.60	10.77	10.44	11.79	1.39	11.23	2.84	9.79		
21101.56f	.....	.....	0.71	10.68	.....	.....	3.40	11.27	1.18	9.59		
21103.55f	3.74	11.54	2.70	11.20	14.44	11.79	1.19	11.12	3.17	9.49		
21155.49f	3.98	11.54	3.03	11.20	7.29	11.73	2.76	11.85	0.04	8.79		
21303.75f	.....	.....	9.06	11.89	9.19	11.73	1.73	11.38	3.34	8.99		
21308.74f	9.38	11.06	1.15	10.59	.....	.....	2.52	11.71	0.99	9.09		
21309.72f	0.01	10.67	2.13	10.86	.....	.....	3.50	11.27	1.97	9.96		
21425.67f	.....	.....	2.28	10.86	.....	.....	0.07	10.81	2.22	9.87		
21428.66f	8.27	11.25	5.27	11.86	.....	.....	3.06	11.78	1.54	9.49		
21438.67f	.....	.....	2.37	10.95	14.72	11.83	0.47	11.08	0.54	8.99		

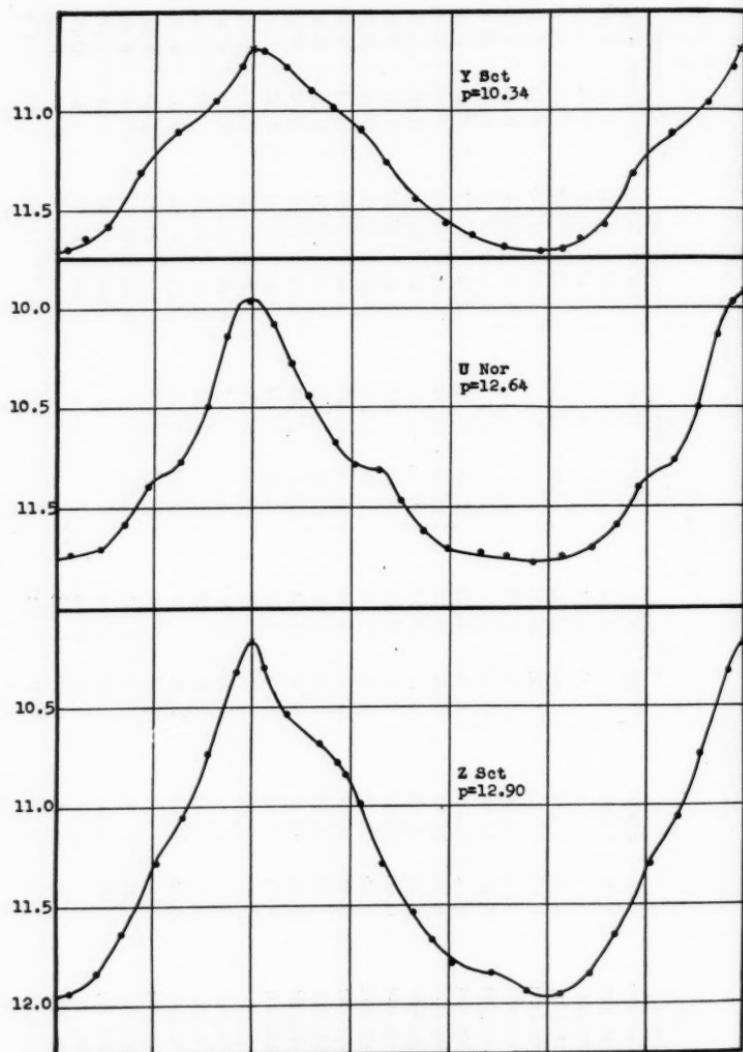


TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	Y Sct			Z Sct			RU Sct			X Sct			SS Sct		
	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase
21451.58f	0.17	10.67	2.38	10.86	7.93	11.71	0.79	11.00	2.44	10.04					
21454.62f	3.21	11.45	5.42	11.89	10.97	11.77	3.83	11.20	1.80	9.69					
21455.56f	4.15	11.63	6.36	11.89	11.91	11.79	0.57	11.15	2.74	9.87					
21460.55f	9.14	11.10	11.35	10.77	16.90	11.79	1.36	11.23	...	...					
21460.60f	...	...	11.40	11.29	16.95	11.81	1.41	11.27	0.44	8.89					
21462.52f	0.77	10.94	0.42	10.31	18.87	10.83	3.33	11.64	2.36	10.04					
21523.54f	10.08	10.67	9.83	11.54	1.11	10.72	1.38	11.23	0.97	9.09					
21758.72f	7.41	11.54	12.78	10.13	19.62	10.39	1.47	11.38	1.20	9.69					
21788.68f	6.34	11.69	4.04	11.63	...	...	2.05	11.71	1.79	9.91					
21790.67f	8.33	11.23	6.03	11.80	...	...	4.04	10.81	0.11	8.73					
21817.56f	4.20	11.57	7.11	11.89	19.38	10.22	1.54	11.23	1.30	9.69					
21818.58f	5.22	11.66	8.13	11.95	0.70	10.83	2.56	11.58	2.32	10.04					
21819.55f	6.19	11.69	9.10	11.72	1.67	11.01	3.53	11.27	3.29	9.19					
21834.58f	0.54	10.80	11.23	11.77	16.70	11.47	...	...	3.63	8.99					
21836.53f	2.49	11.20	0.28	10.22	18.65	10.97	3.72	11.23	1.91	9.96					
21844.56f	0.17	10.67	...	...	...	...	3.35	11.71	2.60	9.79					
21847.54f	3.15	11.60	11.29	11.20	...	...	2.13	11.64	1.91	9.87					
22135.67f	1.73	11.01	2.68	11.12	2.65	10.83	0.60	11.08	0.01	8.79					
22194.56f	8.91	11.01	9.96	11.63	2.45	10.99	0.72	10.98	0.17	8.89					
22543.60f	6.34	11.63	10.66	11.54	16.65	11.67	1.32	11.23	0.44	9.09					
22546.65f	9.39	11.10	0.81	10.59	0.00	10.17	0.17	11.04	3.49	8.99					
22584.56f	5.94	11.75	0.01	9.94	18.21	11.21	0.30	10.70	1.02	9.49					
23181.86f	3.43	11.54	3.83	11.29	4.93	11.42	1.48	11.44	3.59	8.79					
23198.82f	10.05	10.80	7.89	11.89	2.19	10.97	1.65	11.27	2.19	9.87					
23205.79f	6.68	11.66	1.96	10.77	9.16	11.75	0.22	10.81	1.82	9.91					

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	Y Set			Z Set			RU Set			X Set			SS Set		
	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase
23219.72f	10.27	10.55	2.99	10.95	3.39	11.06	1.56	11.44	1.06	9.19	...	...	...	...	...
23225.75f	...	...	9.02	11.72	9.42	11.83	3.39	11.44	3.42	9.29	...	...	...	...	...
23234.74f	4.61	11.63	5.10	11.83	18.41	10.94	3.98	10.81	...	...	...	...	...	...	...
23248.68f	...	...	6.14	11.83	12.65	11.83	1.13	11.19	0.66	8.89	...	...	...	...	...
23257.65f	6.84	11.69	2.21	10.86	1.93	10.97	1.71	11.31	2.28	10.04	...	...	...	...	...
23305.62f	3.10	11.28	1.48	10.86	10.50	11.69	3.50	11.51	2.53	9.87	...	...	...	...	...
23314.60f	1.74	10.99	7.55	11.98	19.48	10.50	4.08	10.81	0.49	9.04	...	...	...	...	...
23338.57f	...	...	5.72	11.89	4.06	11.16	2.86	11.58	2.44	9.87	...	...	...	...	...
23535.87f	5.84	11.69	9.49	11.46	4.40	11.11	2.86	11.71	1.50	9.87	...	...	...	...	...
23641.68f	8.23	11.23	12.09	10.68	11.72	11.83	3.72	11.19	0.84	9.09	...	...	...	...	...
23666.56f	2.09	10.96	11.17	10.86	16.91	11.79	3.41	11.27	0.02	8.79	...	...	...	...	...
23691.53f	6.38	11.75	10.33	11.20	...	...	3.19	11.78	2.96	9.69	...	...	...	...	...
23695.55z	0.06	10.80	1.45	10.68	6.50	11.42	3.01	11.78	3.31	9.19	...	...	...	...	...
23698.52z	3.03	11.20	4.42	11.54	9.47	11.71	1.78	11.23	2.61	9.69	...	...	...	...	...
23702.53z	...	...	8.43	11.98	13.48	11.83	1.60	11.23	2.95	9.87	...	...	...	...	...
23914.87z	2.21	11.12	1.44	10.77	9.17	11.83	4.03	10.70	2.36	9.87	...	...	...	...	...
23931.77y	8.76	11.01	5.44	11.92	6.37	11.58	4.14	10.58	0.90	9.09	...	...	...	...	...
23934.77z	1.42	10.94	8.44	11.98	9.37	11.79	2.94	11.58	0.23	8.79	...	...	...	...	...
23935.78z	2.43	11.12	9.45	11.92	10.37	11.77	3.95	10.92	1.24	9.49	...	...	...	...	...
23936.77y	3.42	11.51	10.44	10.95	11.37	11.83	0.75	11.04	2.23	9.96	...	...	...	...	...
23939.78z	6.43	11.75	0.55	10.59	14.38	11.83	3.76	11.08	1.57	9.87	...	...	...	...	...
23962.72z	...	...	10.59	11.63	17.62	11.63	1.51	11.27	2.49	9.79	...	...	...	...	...
24018.61z	2.53	11.15	1.97	10.68	14.42	11.89	2.82	11.71	3.31	8.99	...	...	...	...	...
24025.57y	9.49	11.01	8.93	11.80	1.68	10.83	1.39	11.23	2.93	9.87	...	...	...	...	...
24047.57z	0.47	10.80	5.13	11.80	3.99	11.27	2.40	11.78	2.90	9.44	...	...	...	...	...

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

## SECTION A

J. D. and Telescope	Y Set		Z Set		RU Set		X Set		SS Set
	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	
24073.53z	5.75	11.75	5.28	11.80	10.25	11.69	3.17	11.78	3.16 9.39
24089.47y	1.00	10.80	...	...	6.50	11.27	2.32	11.51	0.74 8.99
24289.86z	4.91	11.57	2.28	10.68	9.92	11.69	1.20	11.00	2.89 9.39
24328.76z	2.44	11.08	2.48	10.86	9.43	11.69	2.32	11.51	...
24346.64z	9.98	10.96	7.46	12.01	7.61	11.63	3.41	11.38	0.93 9.19
24346.69y	10.03	10.80	...	...	7.66	11.63	3.46	11.58	0.98 8.99
24401.58z	2.87	11.15	10.79	10.86	3.46	10.99	3.77	10.81	0.80 9.09
24415.51y	6.46	11.63	11.82	10.49	17.39	11.53	0.91	11.23	0.05 8.79
24627.86z	1.64	10.94	4.84	11.80	13.08	11.83	3.36	11.27	3.14 9.09
24682.74z	5.81	11.63	8.11	11.98	8.87	11.63	3.67	11.23	2.95 9.64
24699.69z	1.08	10.96	12.16	10.31	6.12	11.47	3.82	11.04	1.55 9.59
24740.54z	0.56	10.67	1.40	10.31	7.58	11.58	2.69	11.71	...
24767.57y	6.91	11.57	2.63	10.86	14.92	11.77	0.34	10.81	3.35 9.19
24769.53y	8.87	11.08	4.59	11.63	16.88	11.73	2.30	11.51	1.63 9.87
24899.82y	1.31	11.01	2.65	10.77	10.81	11.73	1.70	11.44	0.64 8.89
25108.61y	6.69	11.51	8.22	12.07	1.42	10.72	1.34	11.19	2.97 9.59
25122.53y	10.26	10.80	...	...	...	...	...	...	...
25388.50z	7.36	11.54	4.28	11.54	5.56	11.47	4.16	10.70	0.17 8.73
25413.76r	1.59	11.01	3.73	11.38	...	...	0.03	10.70	...
25449.67r	6.48	11.66	0.94	10.22	...	...	2.36	11.51	2.61 9.69
25801.70r	6.90	11.48	4.62	11.54	5.13	11.06	1.75	11.19	...
25808.72r	3.58	11.48	11.64	10.68	12.15	11.77	0.38	10.81	1.88 9.87
25824.64r	9.16	11.01	1.76	10.86	8.38	11.53	3.70	11.23	3.11 9.49
25878.52r	0.99	10.80	4.03	11.54	...	...	3.01	11.44	1.93 9.87
25889.51r	1.64	10.99	2.12	10.77	...	...	1.40	11.04	1.90 9.87

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION B									
J. D. and Telescope	W Sgr Phase	W Sgr Mag.	X Sgr Phase	X Sgr Mag.	J. D. and Telescope	W Sgr Phase	W Sgr Mag.	X Sgr Phase	X Sgr Mag.
14757.84e	0.80	5.00	3.87	5.91	15533 69f	1.97	5.64	1.49	5.32
14767.81e	3.18	5.64	6.83	5.16	15540 69e	1.37	5.32	1.47	5.32
14812.70e	2.50	5.64	2.64	5.80	15560 67f	6.16	5.80	0.42	4.84
14862.62f	6.85	5.48	3.49	5.96	15575 67f	5.97	6.32	1.40	5.48
14867.61f	4.24	6.03	1.47	5.64	15602 60f	2.52	5.48	0.28	5.48
14874.59f	3.63	5.48	1.43	5.85	15609 60f	1.93	5.16	0.27	5.32
14875.60f	4.64	6.03	2.44	5.64	15609 64f	1.97	5.32	0.31	5.00
14898.57f	4.82	6.15	4.38	5.91	15613 57e	5.90	6.38	4.24	6.02
14904.57f	3.23	6.03	3.37	6.07	15632 57f	2.11	5.32	2.21	5.85
14935.52f	3.80	5.64	6.28	5.64	15634 52e	4.06	6.38	4.16	5.80
14942.53f	3.21	5.48	6.27	4.84	15634 57f	4.11	6.26	4.21	6.07
15071.88f	3.45	5.92	2.41	5.48	15636 51e	6.03	6.03	6.15	5.16
15091.91e	0.69	4.84	1.41	5.32	15841 89f	3.84	5.80	1.20	5.48
15117.82f	3.82	5.80	6.29	5.00	15842 81f	7.29	4.84	2.12	5.91
15119.82e	5.82	6.15	1.27	5.32	15842 87e	7.35	5.00	2.18	5.32
15148.72f	4.34	6.26	2.13	5.32	15868 78f	2.88	5.48	0.04	5.16
15192.65e	2.70	5.64	3.99	5.32	15870 75f	4.85	6.03	2.01	5.64
15198.67f	1.12	5.16	3.00	5.91	15872 81f	...	...	4.07	6.18
15223.64e	5.71	6.50	2.92	5.64	15873 81e	0.31	5.00	5.07	5.48
15264.56f	6.25	6.09	5.79	5.32	15885 83f	4.74	6.38	3.07	6.07
15465.91e	2.54	5.48	...	...	15896 73e	0.45	5.32	6.96	4.52
15517.75e	1.22	5.32	6.58	5.16	15897 70f	1.42	5.48	0.92	5.16
15526.86f	2.73	5.64	1.67	5.32	15898 73e	2.45	5.32	1.95	5.32
15532.70f	0.98	5.32	0.50	5.16	15911 72f	0.15	5.00	0.91	5.32

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—(cont.)

SECTION B									
J. D. and Telescope	W Sgr Phase	W Sgr Mag.	X Sgr Phase	X Sgr Mag.	J. D. and Telescope	W Sgr Phase	W Sgr Mag.	X Sgr Phase	X Sgr Mag.
15912.61f	1.14	4.84	1.80	5.32	16226.82e	3.96	6.15	0.51	4.68
15914.54f	3.07	5.48	3.73	6.02	16229.77f	6.90	5.48	3.46	5.85
15914.59f	3.12	5.48	3.78	5.96	16232.77e	2.31	5.32	6.46	4.68
15918.73f	7.26	5.16	0.91	5.16	16233.78f	3.32	5.92	0.46	5.00
15925.70f	6.63	5.64	0.87	4.84	16235.77e	5.31	6.26	2.45	5.16
15927.63f	0.97	5.16	2.80	5.96	16241.73f	3.67	6.26	1.40	5.16
15927.67f	1.01	5.00	2.84	5.64	16253.71f	0.46	5.32	6.37	5.00
15932.65e	5.99	5.92	0.81	5.32	16254.82f	1.57	5.24	0.47	4.84
15933.68f	7.02	5.48	1.84	5.80	16257.73e	4.48	6.03	3.38	5.91
15934.65f	0.39	5.32	2.81	6.02	16259.72e	6.47	6.03	5.37	5.64
15938.66f	4.40	6.50	6.81	4.68	16260.73e	7.48	5.00	6.38	5.00
15940.64f	6.38	6.20	1.79	5.64	16268.68f	0.24	4.68	0.30	5.00
15943.62e	1.77	5.32	4.77	5.64	16268.73f	0.29	4.84	0.35	5.00
15960.65f	3.61	6.15	0.77	4.68	16279.75f	3.72	5.64	4.36	5.85
15974.57f	2.34	5.32	0.66	4.84	16279.80f	3.77	5.92	4.41	5.64
16006.60f	3.99	6.38	4.65	5.96	16282.66e	6.63	5.48	0.26	5.00
16010.57f	0.37	5.16	1.61	5.32	16284.79f	1.16	5.00	2.39	5.32
16023.56f	5.76	6.38	0.58	5.32	16288.73f	5.10	6.09	6.33	5.32
16034.52f	1.53	5.48	4.52	5.64	16295.58f	4.36	5.92	6.17	5.32
16177.84f	0.54	4.84	0.61	5.00	16297.69f	6.47	6.15	1.27	5.16
16208.77f	1.09	5.00	3.50	5.85	16308.64f	2.23	5.40	5.21	5.80
16222.70f	7.43	4.68	3.40	5.85	16311.63f	5.22	6.50	1.19	5.16
16224.86e	1.99	5.16	5.56	5.00	16320.57e	6.56	5.48	3.12	5.80
16226.76f	3.89	5.80	0.45	4.68	16337.61f	0.82	5.32	6.13	5.32

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	Section B						X Sgr					
	W Sgr Phase	Mag.	X Sgr Phase	Mag.	J. D. and Telescope	W Sgr Phase	Mag.	X Sgr	Phase	Mag.	X Sgr	Phase
16337.65f	0.86	5.32	6.17	5.40	16644.68e	4.09	5.92	4.71	5.80			
16339.61f	2.82	5.32	1.12	5.48	16646.70f	6.11	6.38	6.73	5.00			
16339.65f	2.86	5.80	1.16	5.64	16650.72f	2.53	5.80	3.74	6.18			
16344.64f	0.25	4.68	6.15	5.64	16650.76f	2.57	5.48	3.78	5.96			
16361.62f	2.04	5.48	2.10	5.32	16652.62f	4.43	6.03	5.64	5.64			
16376.62f	1.85	5.64	3.08	5.96	16663.60e	0.22	5.16	2.60	4.68			
16396.54f	6.58	5.72	1.96	5.48	16663.80f	0.42	5.00	2.80	5.96			
16553.90e	4.45	6.03	5.08	5.48	16668.72f	5.34	6.03	0.71	5.00			
16582.72f	2.89	5.48	5.85	5.00	16669.70f	6.33	6.03	1.69	5.80			
16582.77f	2.94	5.32	5.90	5.64	16683.52f	4.95	6.26	1.49	5.16			
16583.88e	4.05	6.03	0.00	4.68	16691.57e	5.41	6.15	2.53	5.48			
16585.75f	5.92	6.03	1.87	5.48	16691.57f	5.41	5.92	2.53	5.64			
16591.71f	4.28	5.92	0.82	5.48	16694.63f	0.87	5.00	5.59	5.48			
16606.72f	4.10	6.15	1.81	5.48	16694.67f	0.91	5.00	5.63	5.64			
16606.80f	4.18	6.03	1.89	5.16	16697.67f	2.63	6.26	1.50	5.48			
16608.80f	6.18	5.92	3.89	5.96	16711.58f	2.41	5.16	2.45	5.16			
16608.87f	6.25	6.15	3.96	5.96	16726.55f	4.21	5.48	5.42	5.96			
16613.75e	3.54	5.64	1.83	5.48	16743.54f	5.23	5.92	6.44	5.48			
16615.72f	5.51	6.15	3.80	5.91	16760.51f	5.99	5.92	1.35	5.64			
16634.63f	1.63	5.64	1.67	5.64	16922.89f	1.29	5.48	2.48	5.48			
16634.67f	1.67	5.32	1.71	5.48	16933.84f	4.64	6.15	6.42	5.32			
16636.77f	3.77	6.26	3.81	6.07	16934.87f	5.67	5.80	0.44	5.32			
16640.76f	0.17	5.32	0.79	5.32	16935.79f	5.59	5.72	1.36	5.00			
16642.68e	2.09	5.48	2.71	5.80	16938.79f	2.00	5.56	4.36	5.80			

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION B				SECTION A			
	W Sgr Phase	W Sgr Mag.	X Sgr Phase	X Sgr Mag.	J. D. and Telescope	W Sgr Phase	W Sgr Mag.	X Sgr Phase
16938.83f	2.04	5.16	4.40	5.91	17066.58f	0.67	5.00	5.94
16939.85e	3.06	5.48	5.42	5.32	17075.57f	2.07	5.16	0.91
16943.84f	7.05	5.92	2.39	5.32	17076.67f	3.17	6.15	5.91
16944.86e	0.47	4.68	3.41	5.85	17098.57f	2.28	5.48	2.88
16948.80f	1.63	5.16	6.32	5.00	17105.61f	1.73	5.48	5.85
16976.70f	1.93	5.48	0.20	5.48	17107.57f	3.69	5.92	4.87
16976.75f	1.98	5.16	0.25	5.00	17124.53f	5.46	5.92	6.02
16979.77f	5.00	6.38	3.27	5.96	17319.82e	3.28	5.64	0.79
16988.79f	6.43	5.64	5.28	5.85	17325.76f	1.62	5.48	6.78
16989.73e	7.37	5.00	6.22	5.00	17325.80f	1.66	5.16	5.71
16991.77f	1.89	5.32	1.25	5.64	17335.80f	4.07	6.26	5.91
16999.64f	2.09	5.64	2.10	5.85	17343.82f	4.49	5.80	1.73
16999.69f	2.14	5.32	2.15	5.85	17353.83f	6.91	5.64	2.94
17004.65f	7.10	5.64	0.10	4.84	17360.74f	6.22	6.26	5.85
17006.72f	1.57	5.64	2.17	5.80	17363.78f	1.07	5.48	5.91
17007.65f	2.50	5.64	3.10	5.80	17371.74f	2.03	5.48	2.61
17009.77f	4.62	6.50	5.22	5.96	17372.67e	2.96	5.64	5.85
17017.76f	5.02	6.03	6.20	5.32	17375.69e	5.98	5.48	3.64
17019.77f	...	...	1.20	4.84	17376.72f	7.01	5.32	5.92
17025.68e	5.34	6.03	0.10	4.68	17377.70f	0.40	4.98	1.66
17031.70e	3.77	5.80	6.12	5.16	17378.71f	1.41	5.16	5.85
17032.77f	4.84	6.38	0.18	5.16	17384.72f	7.42	5.16	2.57
17034.63e	6.70	5.32	2.04	5.48	17394.61f	2.12	5.16	5.56
17037.67f	2.14	5.80	5.08	5.80	17394.70f	2.21	5.64	4.45

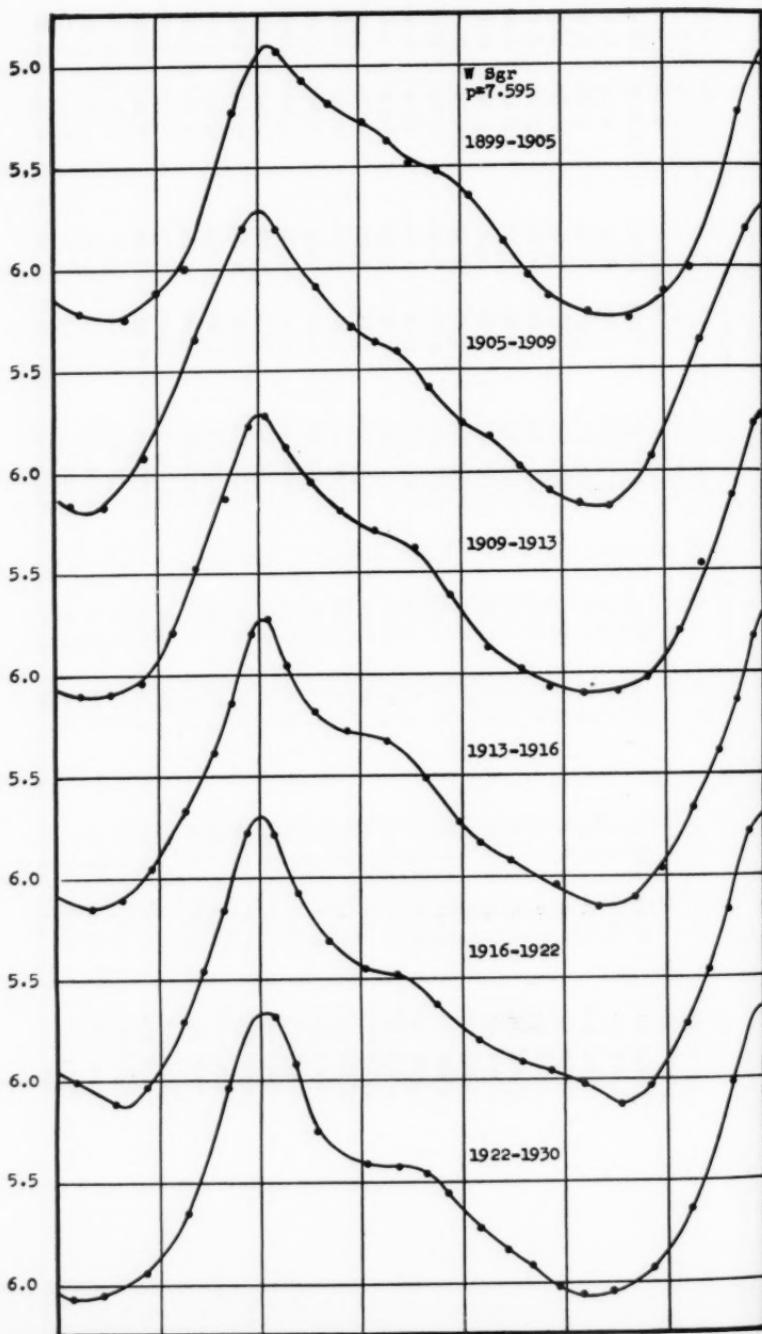


TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION B			X Sgr			W Sgr			J. D. and Telescope			X Sgr		
	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase
17403.63f	3.54	5.64	6.46	5.48	17706.82f	2.93	5.92	1.16	5.16						
17403.72f	3.63	6.15	6.55	5.00	17707.81q	3.92	5.80	2.15	5.48						
17408.62e	0.94	5.16	4.44	5.80	17718.77f	7.29	4.76	6.10	5.48						
17429.62f	6.75	5.48	4.40	5.96	17727.71f	1.04	5.32	1.01	5.32						
17430.57f	0.10	4.52	5.35	5.96	17728.80f	2.13	5.16	2.10	5.48						
17431.57f	1.10	5.16	6.35	5.85	17730.74f	4.07	6.03	4.04	5.96						
17433.63f	3.16	5.64	1.40	5.64	17758.68f	1.63	5.48	3.94	5.91						
17437.56e	7.09	5.32	5.33	5.80	17758.72f	1.67	5.48	3.98	5.91						
17445.55f	7.49	4.52	6.31	5.85	17759.67f	2.62	5.64	4.93	5.91						
17447.57f	1.91	5.32	1.32	5.80	17762.63e	5.58	6.26	0.88	5.48						
17450.55f	4.89	6.38	4.30	6.07	17774.72f	2.48	5.92	5.96	5.91						
17454.53e	1.28	5.32	1.27	5.16	17784.62e	4.78	6.15	1.84	5.48						
17458.57q	5.32	5.92	5.31	5.85	17787.64f	0.21	5.16	4.86	6.02						
17459.57q	6.32	5.48	6.31	5.64	17789.65f	2.22	5.32	6.87	5.00						
17465.56f	4.71	6.38	5.29	6.07	17793.65f	6.20	6.03	3.83	5.93						
17476.51f	0.47	4.84	2.22	5.91	17797.56e	2.53	5.64	0.75	5.00						
17482.52f	6.48	5.64	1.22	5.80	17802.55f	7.52	4.76	5.74	5.91						
17492.49q	1.26	5.48	4.17	5.80	17803.55e	0.93	5.32	6.74	5.32						
17493.51f	2.28	5.32	5.19	5.96	17803.56f	0.94	4.84	6.75	4.68						
17495.54f	4.31	6.38	0.21	5.00	17813.56f	3.33	6.15	2.72	6.02						
17680.84q	7.33	4.92	3.22	5.80	17816.55f	6.33	6.03	5.72	5.80						
17684.80f	3.70	5.92	0.17	5.00	17820.55f	2.74	5.92	2.71	5.96						
17686.81f	5.71	6.03	2.18	5.91	17838.48q	2.69	5.32	5.58	5.80						
17703.90f	0.01	5.00	5.25	6.02	18027.86f	5.01	6.26	6.73	5.16						

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION B			X Sgr			W Sgr			X Sgr			W Sgr			
	Phase	W Mag.	X Sgr	Phase	W Mag.	X Sgr	Phase	W Mag.	X Sgr	Phase	W Mag.	X Sgr	Phase	W Mag.	X Sgr	
18033.85f	3.38	5.64	5.68	5.96	18145.61f	1.21	5.32	5.26	5.91	18145.61f	4.26	6.15	1.30	5.16		
18034.81f	4.34	5.80	6.64	5.32	18148.66f	18149.59f	5.19	6.15	2.23	5.64	18149.59f	3.61	5.80	1.22	5.48	
18034.83e	4.36	5.92	6.66	5.00	18155.60f	18156.61f	4.62	6.38	2.23	5.91	18156.61f	5.19	6.38	3.18	5.80	
18042.86f	4.79	6.26	0.66	5.16	18157.56f	18169.56f	5.57	6.20	1.16	5.40	18169.56f	2.38	5.48	3.12	6.02	
18045.86q	0.20	4.68	3.66	5.72	18171.52f	18174.57f	7.39	4.52	6.17	5.16	18174.57f	7.47	5.16	6.25	5.64	SHAPLEY
18056.75f	3.49	5.64	0.53	5.16	18174.65q	18182.59q	0.22	4.76	0.17	5.00	18182.59q	1.15	5.32	1.10	5.32	
18063.79e	2.94	5.48	0.56	5.48	18183.52f	18193.51e	3.54	5.64	4.08	5.80	18193.51e	5.46	5.86	5.10	5.64	
18069.81f	1.37	5.16	6.58	5.40	18194.53q	18197.58f	4.56	5.86	5.10	5.64	18197.58f	0.02	5.00	1.14	5.48	
18069.86f	1.42	5.32	6.63	5.32	18200.52q	18209.53f	4.37	6.26	6.08	5.64	18209.53f	2.00	5.32	3.12	6.02	
18070.74f	2.30	5.16	0.50	5.24	18204.87f	18209.53f	0.82	5.00	3.10	6.07	18209.53f	2.25	5.32	4.08	5.72	
18087.76q	4.12	6.03	3.50	5.80	18210.56f	18212.59q	1.15	5.32	4.08	5.80	18212.59q	4.08	5.86	4.08	5.80	
18097.77f	6.54	5.56	6.49	5.32	18213.52f	18215.56f	3.54	5.64	4.08	5.80	18215.56f	4.08	5.86	4.08	5.80	
18098.80f	7.57	4.68	0.51	5.32	18216.56f	18218.59q	4.56	5.86	5.10	5.64	18218.59q	0.02	5.00	1.14	5.48	
18100.72f	1.89	5.48	2.43	5.48	18220.52q	18222.56f	4.37	6.26	6.08	5.64	18222.56f	2.25	5.32	3.12	6.02	
18103.70e	4.87	6.15	5.41	5.72	18223.56f	18225.59q	0.82	5.00	3.10	6.07	18225.59q	2.25	5.32	4.08	5.72	
18111.72f	5.30	6.26	6.42	5.32	18226.56f	18228.59q	4.56	5.86	5.10	5.64	18228.59q	0.02	5.00	1.14	5.48	
18111.78f	5.36	6.26	6.48	5.32	18230.52q	18232.56f	4.37	6.26	6.08	5.64	18232.56f	2.25	5.32	3.12	6.02	
18119.58f	5.56	6.15	0.26	4.84	18233.56f	18235.59q	4.56	5.86	5.10	5.64	18235.59q	0.02	5.00	1.14	5.48	
18119.73q	5.71	5.92	0.41	4.55	18236.56f	18238.59q	4.37	6.26	6.08	5.64	18238.59q	2.25	5.32	3.12	6.02	
18123.68e	2.07	5.32	4.36	5.80	18240.75f	18242.81e	4.08	5.86	4.08	5.80	18242.81e	2.94	5.48	4.08	5.72	
18129.66e	0.45	4.84	3.33	5.80	18242.75f	18241.85q	4.04	5.92	4.04	5.16	18241.85q	4.94	5.80	4.04	5.72	
18129.67f	0.46	5.16	3.34	5.80	18242.85q	18242.75f	4.04	5.92	4.04	5.16	18242.75f	5.31	5.80	4.04	5.72	
18130.68f	1.47	5.48	4.35	6.07	18242.75f	18242.85q	4.04	5.92	4.04	5.16	18242.85q	5.31	5.80	4.04	5.72	
18138.65q	1.75	5.32	5.31	5.80	18242.85q	18242.75f	4.04	5.92	4.04	5.16	18242.75f	5.31	5.80	4.04	5.72	

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

D. and Telescope	W Sgr			X Sgr			J. D. and Telescope			W Sgr			X Sgr		
	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase
8423.81e	6.00	6.03	3.01	5.80	18500.72f	6.96	5.48	2.80	5.96	18500.72f	6.96	5.48	2.80	5.96	18500.72f
8436.82f	3.82	5.92	2.00	5.48	18501.59f	0.23	5.00	3.67	6.07	18501.59f	0.23	5.00	3.67	6.07	18501.59f
8439.78q	6.79	5.64	4.97	5.91	18501.64f	0.28	4.68	3.72	5.80	18501.64f	0.28	4.68	3.72	5.80	18501.64f
8440.69f	0.09	4.68	5.87	5.91	18505.66f	4.30	6.15	0.73	5.32	18505.66f	4.30	6.15	0.73	5.32	18505.66f
8452.71q	4.52	6.38	3.87	5.72	18506.68f	5.32	6.38	1.75	5.80	18506.68f	5.32	6.38	1.75	5.80	18506.68f
8453.80f	5.61	6.38	4.96	6.12	18507.60e	6.24	5.64	2.67	5.32	18507.60e	6.24	5.64	2.67	5.32	18507.60e
8454.78f	6.59	5.32	5.94	5.48	18510.60f	1.65	5.40	5.67	5.80	18510.60f	1.65	5.40	5.67	5.80	18510.60f
8457.67f	1.88	5.48	1.81	5.64	18511.60f	2.65	5.32	6.67	4.68	18511.60f	2.65	5.32	6.67	4.68	18511.60f
8466.70e	3.32	5.64	3.83	6.03	18513.52f	4.57	6.15	1.58	5.48	18513.52f	4.57	6.15	1.58	5.48	18513.52f
8466.73f	3.35	6.03	3.86	6.03	18514.62f	5.67	5.92	2.68	5.85	18514.62f	5.67	5.92	2.68	5.85	18514.62f
8466.75q	3.37	5.80	3.88	5.72	18514.63q	5.68	6.15	2.69	5.48	18514.63q	5.68	6.15	2.69	5.48	18514.63q
8467.71f	4.33	6.38	4.84	6.15	18516.60f	0.05	4.68	4.66	6.07	18516.60f	0.05	4.68	4.66	6.07	18516.60f
8471.75f	0.77	4.84	1.87	5.32	18521.61q	5.06	5.92	2.65	5.48	18521.61q	5.06	5.92	2.65	5.48	18521.61q
8472.69f	1.71	5.32	2.81	5.64	18523.61f	7.06	5.24	4.65	5.91	18523.61f	7.06	5.24	4.65	5.91	18523.61f
8473.74q	2.76	5.72	3.86	5.72	18530.62f	6.48	6.03	4.65	6.07	18530.62f	6.48	6.03	4.65	6.07	18530.62f
8474.70e	3.72	5.64	4.82	6.02	18531.56f	7.42	4.52	5.59	5.96	18531.56f	7.42	4.52	5.59	5.96	18531.56f
8475.73f	4.75	6.20	5.85	5.91	18531.61f	7.47	5.00	5.64	6.02	18531.61f	7.47	5.00	5.64	6.02	18531.61f
8479.65f	1.08	4.92	2.76	5.91	18535.56f	3.82	5.80	2.58	5.48	18535.56f	3.82	5.80	2.58	5.48	18535.56f
8481.65f	3.11	5.92	4.79	5.96	18537.55f	5.81	6.03	4.57	5.91	18537.55f	5.81	6.03	4.57	5.91	18537.55f
8483.60f	5.03	6.09	6.71	4.84	18547.59q	0.66	4.68	0.59	5.00	18547.59q	0.66	4.68	0.59	5.00	18547.59q
8484.72q	6.15	6.03	6.82	4.84	18562.50f	0.38	4.68	1.48	5.48	18562.50f	0.38	4.68	1.48	5.48	18562.50f
8485.69f	1.93	5.32	4.78	5.91	18565.53f	3.41	6.15	4.51	6.18	18565.53f	3.41	6.15	4.51	6.18	18565.53f
8497.68q	3.92	6.78	4.52	5.92	18671.52f	3.07	5.80	5.33	5.07	18671.52f	3.07	5.80	5.33	5.07	18671.52f
8499.71f	5.95	6.26	1.79	5.32	18752.84e	0.85	5.32	2.52	5.32	18752.84e	0.85	5.32	2.52	5.32	18752.84e

## SHAPLEY

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION B				SECTION B			
	W Sgr Phase	W Sgr Mag.	X Sgr Phase	X Sgr Mag.	J. D. and Telescope	W Sgr Phase	W Sgr Mag.	X Sgr Phase
18752.89q	0.90	5.48	2.57	5.48	18839.65f	1.33	5.16	4.16
18766.84f	7.25	4.68	2.49	5.64	18839.68q	1.36	5.32	4.19
18774.85e	0.07	5.00	3.49	5.85	18862.66f	4.34	5.92	0.16
18778.86e	4.08	6.15	0.49	5.32	18866.59f	0.67	4.68	4.09
18808.78e	3.62	5.64	2.37	5.48	18878.64f	5.13	5.92	2.12
18811.78e	6.62	5.48	5.37	5.72	18884.63f	3.52	6.15	1.09
18820.77f	0.42	4.68	0.33	5.32	18885.61f	4.50	6.38	2.07
18820.82f	0.47	5.00	0.38	5.16	18887.59f	6.48	5.32	4.05
18821.79f	1.44	5.48	1.35	5.85	18890.61q	1.91	5.64	0.06
18824.79f	4.44	5.92	4.35	6.02	18892.62f	3.92	6.15	2.07
18825.73f	5.38	6.03	5.29	5.91	18904.58q	0.69	5.00	0.01
18825.77f	5.42	6.26	5.33	6.07	18908.54f	4.65	6.15	3.97
18827.76f	7.41	4.84	0.31	5.24	18911.53f	0.04	4.68	6.96
18828.75f	0.81	5.16	1.30	5.32	18912.53f	1.04	4.68	0.95
18830.73e	2.79	5.32	3.28	5.72	18917.51f	6.02	5.64	5.93
18831.68f	3.74	5.92	4.23	5.91	18919.55f	0.47	5.00	0.96
18831.75f	3.81	6.03	4.30	6.12	18939.51f	5.24	5.92	6.90
18848.63f	5.50	6.38	0.15	5.00	19149.80f	2.87	6.03	6.85
18849.70f	6.57	5.32	1.22	5.48	19153.84f	6.91	5.48	3.88
18852.65q	1.92	5.48	4.17	5.64	19157.84f	3.31	5.92	0.87
18852.70e	1.97	5.16	4.22	5.85	19159.86f	5.33	6.38	2.89
18855.75f	5.02	6.26	0.26	5.32	19162.83q	0.71	5.24	5.86
18856.68f	5.95	6.03	1.19	5.48	19184.73e	7.42	4.68	6.73
18859.60e	1.28	5.16	4.11	5.72	19189.76q	4.85	5.92	4.74

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION B				SECTION B				X Sgr			
	W Sgr Phase	W Mag.	X Sgr Phase	W Mag.	J. D. and Telescope	W Sgr Phase	W Mag.	X Sgr Phase	W Sgr Phase	W Mag.	X Sgr Phase	W Mag.
19191.67e	6.76	5.32	6.65	5.00	19271.55e	3.10	5.92	2.40	5.48	...	...	...
19203.71f	3.61	6.03	4.67	5.72	19271.61q	3.16	5.80	2.46	5.64	...	...	...
19204.74f	4.64	6.26	5.70	6.02	19276.56f	0.51	5.16	0.40	5.16	...	...	...
19208.72q	1.03	5.08	2.67	5.48	19286.54q	2.90	5.64	3.37	5.64	...	...	...
19213.63f	5.94	5.80	0.57	5.00	19288.50f	4.86	5.92	5.33	5.85	...	...	...
19215.74f	0.45	5.16	2.68	5.96	19292.56f	1.32	5.32	2.38	5.32	...	...	...
19218.70q	3.41	5.80	5.64	5.72	19300.50f	1.67	5.32	3.31	6.07	...	...	...
19219.64e	4.35	5.80	6.58	5.32	19302.51f	3.68	5.64	5.32	6.02	...	...	...
19219.68q	4.39	5.92	6.62	4.84	19311.53f	5.10	6.03	0.31	5.32	...	...	...
19224.65f	1.77	5.48	4.58	6.07	19487.88e	6.77	5.48	1.38	5.00	...	...	...
19225.61f	2.73	5.48	5.56	6.02	19510.81f	6.91	4.84	3.28	5.48	...	...	...
19233.62f	3.14	5.48	6.54	5.32	19511.78f	0.29	4.60	4.25	5.80	...	...	...
19233.66f	3.18	6.15	6.58	5.48	19511.82f	0.33	5.00	4.29	5.91	...	...	...
19237.63f	7.15	5.16	3.54	5.91	19513.83e	2.34	5.16	6.30	5.16	...	...	...
19240.60f	2.53	5.48	6.51	5.85	19517.78f	6.29	6.03	3.24	5.80	...	...	...
19240.63q	2.56	5.48	6.54	5.48	19518.78f	7.29	4.52	4.24	5.91	...	...	...
19241.61f	3.54	6.15	0.51	5.48	19518.82f	7.33	4.92	4.28	5.91	...	...	...
19243.62q	5.55	6.15	2.52	5.48	19520.83e	1.74	5.32	6.29	5.32	...	...	...
19244.63q	6.56	5.80	3.53	5.64	19532.72f	6.04	5.80	4.16	5.91	...	...	...
19253.60f	0.34	5.00	5.48	6.12	19541.78e	7.48	5.16	6.19	5.00	...	...	...
19264.60f	3.74	6.26	2.46	5.91	19541.79f	7.51	4.76	6.22	5.16	...	...	...
19267.56f	6.70	5.32	5.42	5.96	19542.85f	0.98	5.00	0.27	4.68	...	...	...
19268.57q	0.12	4.52	6.43	5.24	19545.76f	3.89	5.92	3.18	5.80	...	...	...
19270.55q	2.10	5.48	1.40	5.32	19545.81f	3.94	5.80	...	...	...	...	...

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION B						SECTION B					
	W Sgr Phase	Mag.	X Sgr Phase	Mag.	J. D. and Telescope	W Sgr Phase	Mag.	X Sgr Phase	Mag.	J. D. and Telescope	W Sgr Phase	Mag.
19557.74e	0.68	5.00	1.13	5.16	19637.56f	1.76	5.00	...	...	19637.56f	1.71	5.91
19561.72f	4.66	6.15	5.11	5.91	19688.52f	2.34	5.16	...	...	19688.52f	2.34	5.84
19561.77f	4.71	6.15	5.16	5.80	19711.53f	2.57	5.32	0.68	...	19711.53f	2.57	5.32
19562.69f	5.63	6.15	6.08	5.16	19865.87e	5.01	6.03	0.77	4.84	19865.87e	5.01	6.03
19572.70f	0.45	5.16	2.07	5.32	19888.84q	5.20	6.15	2.71	5.48	19888.84q	5.20	6.15
19574.72q	...	...	4.09	5.72	19889.83f	6.19	5.64	3.70	5.96	19889.83f	6.19	5.64
19576.71q	4.46	6.26	6.08	5.72	19889.88f	6.24	6.15	3.75	5.91	19889.88f	6.24	6.15
19588.67e	1.23	5.00	4.02	5.72	19898.87f	0.04	5.00	5.73	5.80	19898.87f	0.04	5.00
19588.72f	1.28	5.32	4.07	6.12	19902.83q	4.00	5.92	2.68	5.64	19902.83q	4.00	5.92
19593.66f	6.22	5.92	2.00	5.48	19911.85f	5.42	6.15	4.69	5.80	19911.85f	5.42	6.15
19593.71f	6.27	6.15	2.05	5.16	19911.90f	5.47	6.03	4.74	5.72	19911.90f	5.47	6.03
19599.64f	4.60	5.92	0.97	5.48	19912.80f	6.37	6.03	5.64	5.56	19912.80f	6.37	6.03
19601.64f	6.60	5.32	2.97	5.64	19917.73e	3.71	5.80	3.55	5.64	19917.73e	3.71	5.80
19603.61f	0.98	4.76	4.94	6.02	19917.78q	3.76	6.03	3.60	5.64	19917.78q	3.76	6.03
19603.65f	1.02	5.16	4.98	5.91	19921.75e	0.13	4.68	0.56	5.16	19921.75e	0.13	4.68
19604.55f	1.92	5.16	5.88	5.32	19921.75q	0.13	4.72	0.56	5.00	19921.75q	0.13	4.72
19617.58f	7.35	4.52	4.88	6.07	19921.77f	0.15	4.52	0.58	5.32	19921.77f	0.15	4.52
19620.57f	2.75	5.32	0.86	5.48	19922.82f	1.20	5.16	1.63	5.00	19922.82f	1.20	5.16
19632.53f	7.12	4.84	5.81	5.48	19928.76q	7.14	5.24	0.56	4.84	19928.76q	7.14	5.24
19632.58f	7.17	5.00	5.86	5.32	19930.60f	1.39	5.16	2.40	5.32	19930.60f	1.39	5.16
19644.56f	3.95	5.92	3.82	5.80	19931.66f	2.45	5.32	3.46	5.32	19931.66f	2.45	5.32
19645.63f	5.02	6.03	4.89	5.91	19942.76f	5.95	6.03	0.54	4.68	19942.76f	5.95	6.03
19650.57f	2.37	5.16	2.82	5.91	19943.75f	6.94	5.16	1.53	5.48	19943.75f	6.94	5.16
19650.65f	2.45	5.32	2.90	5.80	19947.66e	3.22	5.48	5.44	5.48	19947.66e	3.22	5.48

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION B											
J. D. and Telescope	W Sgr Phase	W Sgr Mag.	X Sgr Phase	X Sgr Mag.	J. D. and Telescope	W Sgr Phase	W Sgr Mag.	X Sgr Phase	X Sgr Mag.		
19947.70q	3.30	5.80	5.48	5.64	20012.57f	7.41	5.08	0.24	5.00		
19947.72f	3.32	5.48	5.50	5.48	20012.61f	7.45	4.52	0.28	5.00		
19950.71f	6.31	6.03	1.48	4.84	20013.56f	0.80	5.00	1.23	4.68		
19951.68f	7.28	5.00	2.45	5.32	20015.52	2.76	5.92	...	...		
19951.72f	7.32	5.00	2.49	5.48	20024.53q	4.18	5.92	5.19	5.64		
19952.75f	0.75	4.84	3.52	5.64	20027.56f	7.21	5.08	1.21	4.84		
19955.71q	3.71	5.80	6.48	5.24	20029.51f	1.57	5.00	3.16	5.48		
19957.60f	5.60	5.92	1.36	5.00	20038.52f	2.98	5.56	5.15	5.64		
19958.68f	6.68	5.32	2.44	5.48	20043.57f	0.43	4.84	3.19	5.64		
19959.58f	7.58	5.00	3.34	5.96	20044.52f	1.38	5.16	4.14	5.80		
19961.60f	2.01	5.48	5.36	5.64	20044.56f	1.42	5.16	4.18	5.64		
19970.67q	3.48	5.80	0.41	4.68	20047.52f	4.38	5.92	0.13	4.84		
19972.66f	5.47	5.98	2.40	5.56	20028.87q	3.45	5.64	6.20	5.48		
19973.51f	6.32	5.92	3.25	5.96	20240.87q	0.26	4.92	4.18	5.72		
19973.56f	6.37	5.92	3.30	5.85	20246.86q	6.25	5.72	3.16	5.64		
19974.60q	7.41	4.84	4.34	5.80	20255.84q	0.04	4.68	5.13	5.72		
19976.61f	1.83	5.32	6.35	5.80	20259.84q	4.04	5.92	2.12	5.64		
19976.62q	1.84	5.48	6.36	5.48	20276.76e	5.77	5.03	5.02	5.80		
19977.67f	2.89	5.64	0.39	4.68	20277.78q	6.79	5.48	6.04	5.64		
19982.59f	0.21	4.68	5.31	5.56	20280.76e	2.18	5.48	2.00	5.00		
19985.52f	3.14	6.09	1.23	5.32	20280.76q	2.18	5.48	2.00	5.16		
19989.52f	7.14	5.40	5.23	5.91	20282.76f	4.18	6.03	4.00	5.40		
19999.58q	2.01	5.64	1.27	5.00	20283.77q	5.19	6.03	5.01	5.91		
20008.51f	3.35	5.92	3.19	5.48	20286.73q	0.55	5.32	0.96	4.92		

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION B.				SECTION B.				SECTION B.			
	W Sgr Phase	W Sgr Mag.	X Sgr Phase	X Sgr Mag.	J. D. and Telescope	W Sgr Phase	W Sgr Mag.	J. D. and Telescope	W Sgr Phase	W Sgr Mag.	J. D. and Telescope	W Sgr Phase
20286.78f	0.60	4.84	1.01	5.00	20327.70f	3.55	6.03	6.88	4.76	...	...	...
20287.64f	1.46	5.00	1.87	5.48	20328.60f	4.45	6.15	0.77	5.32	...	...	...
20289.69f	3.51	5.64	3.92	5.72	20329.64f	5.49	6.15	1.81	5.48	...	...	...
20294.76q	0.99	5.32	1.98	5.32	20329.69f	5.54	6.03	1.86	5.32	...	...	...
20296.73q	2.96	5.64	3.95	5.64	20330.67f	6.52	6.15	2.84	5.64	...	...	...
20297.67f	3.90	5.32	4.89	5.91	20332.63e	0.88	4.68	4.80	5.64	...	...	...
20297.70e	3.93	6.15	...	...	20336.63f	4.88	6.26	1.79	5.48	...	...	...
20298.72q	4.95	6.03	5.94	5.64	20337.66f	5.91	5.64	2.82	5.32	...	...	...
20300.73q	6.96	5.48	0.94	5.40	20338.67f	6.92	5.16	3.83	5.96	...	...	...
20301.67e	0.30	5.16	1.88	5.00	20339.68f	0.34	4.60	4.84	5.96	...	...	...
20301.72q	0.35	4.68	1.93	5.40	20348.59f	1.65	5.64	6.73	5.32	...	...	...
20304.71f	3.34	5.48	4.92	5.64	20348.62f	1.68	5.16	6.76	4.84	...	...	...
20306.75f	5.38	6.15	6.96	5.16	20352.65f	5.71	6.26	3.78	5.64	...	...	...
20307.56f	6.19	5.80	0.76	4.84	20354.58f	0.05	5.00	5.71	5.91	...	...	...
20307.74f	6.37	6.09	0.94	5.00	20356.66f	2.13	5.16	0.78	4.84	...	...	...
20308.70f	7.33	4.68	1.90	5.56	20365.60f	3.47	5.92	2.71	5.16	...	...	...
20309.65f	0.69	5.16	2.85	5.16	20366.58f	4.45	6.03	3.69	5.99	...	...	...
20309.70q	0.74	5.32	2.90	5.80	20367.54f	5.41	6.38	4.65	5.85	...	...	...
20313.69f	4.73	6.26	6.89	5.16	20367.59f	5.46	6.15	4.70	5.64	...	...	...
20314.70f	5.74	6.03	0.89	5.32	20370.61q	0.89	5.48	0.71	4.68	...	...	...
20315.69f	6.73	5.64	1.88	5.48	20372.62f	2.90	5.80	2.72	5.80	...	...	...
20317.68q	1.12	5.56	3.87	5.72	20373.62f	3.90	6.03	3.72	5.64	...	...	...
20324.66f	0.51	5.32	3.84	5.64	20384.53f	7.21	5.32	0.61	5.00	...	...	...
20327.65f	3.50	6.03	6.83	5.00	20384.53q	7.21	5.32	...	...	...	...	...

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

## TWENTY-FIVE SOUTHERN CEPHEID VARIABLE STARS

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SECTION B											
J. D. and Telescope	W Sgr Phase	W Sgr Mag.	X Sgr Phase	X Sgr Mag.	J. D. and Telescope	W Sgr Phase	W Sgr Mag.	X Sgr Phase	X Sgr Mag.	J. D. and Telescope	W Sgr Phase
20384.58f	7.26	4.84	0.66	5.32	20668.76f	2.83	5.92	4.39	5.80		
20386.52q	1.61	5.64	2.60	5.48	20669.75f	3.82	5.64	5.38	5.64		
20391.53f	6.62	5.32	0.60	4.68	20670.66f	4.73	6.03	...	...		
20392.54q	0.03	4.68	1.61	5.16	20680.66f	7.14	5.48	2.27	5.32		
20393.58f	1.07	5.32	2.65	5.64	20681.71f	0.59	5.00	3.32	5.96		
20394.53f	2.02	5.32	3.60	5.91	20683.62f	2.50	5.16	5.23	5.99		
20413.49q	5.79	5.92	1.52	5.16	20688.67f	0.55	4.68	3.27	5.64		
20414.54f	6.84	5.64	2.57	5.32	20688.71f	0.00	4.92	3.31	5.96		
20426.56f	3.69	6.03	0.57	5.16	20689.62f	0.91	5.32	4.22	5.72		
20440.54f	2.46	5.16	0.53	5.00	20691.62f	2.91	5.80	6.22	5.48		
20567.91q	0.72	5.16	1.70	5.16	20693.61f	4.90	6.03	1.20	5.32		
20572.90q	5.71	6.15	6.69	5.00	20694.65f	5.94	6.03	2.24	5.80		
20577.88q	3.09	5.92	4.66	5.80	20695.62f	6.91	5.16	3.21	5.48		
20596.84q	6.86	5.64	2.58	5.16	20695.66f	6.96	5.32	3.25	5.80		
20605.85q	0.68	5.48	4.58	5.80	20723.65f	4.56	6.03	3.19	5.32		
20626.82f	6.46	5.48	4.52	5.85	20723.65f	4.56	6.15	3.19	5.64		
20627.81q	7.45	4.68	5.51	5.64	20724.61f	5.52	6.38	4.15	5.85		
20628.75q	0.80	5.16	6.45	5.56	20741.56f	7.28	4.68	0.07	4.52		
20630.76e	0.02	4.84	0.41	4.68	20747.52f	5.64	6.15	6.03	5.48		
20651.84f	1.10	5.16	1.49	5.32	20750.52f	1.05	5.16	2.02	5.16		
20653.81f	3.07	5.92	3.46	5.85	20754.51f	5.04	6.15	6.01	5.32		
20655.76f	5.02	6.15	5.41	5.85	20755.77f	6.30	5.92	0.26	4.68		
20657.69e	6.95	5.48	0.33	5.16	20769.48f	4.82	6.15	6.95	5.32		
20664.76f	6.43	5.48	0.39	4.68	20775.51f	3.25	6.15	5.97	5.48		

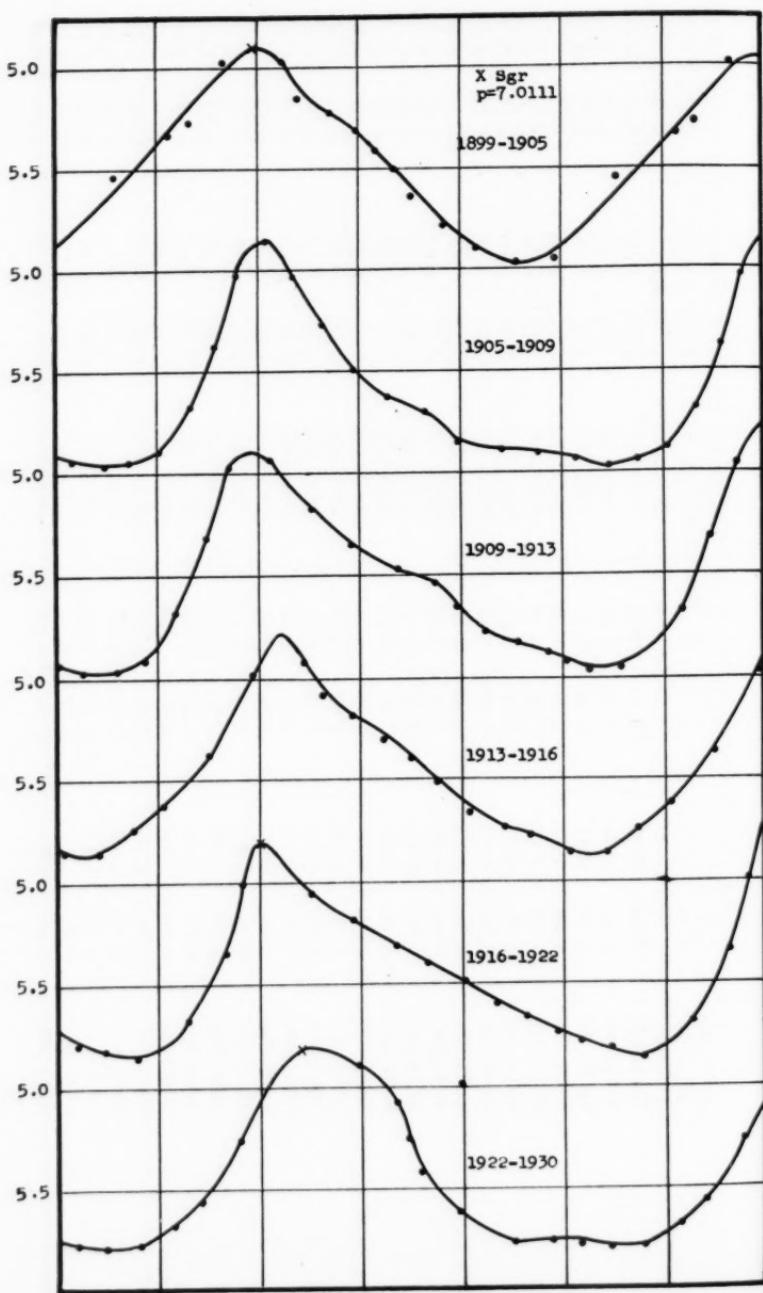


TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION B										SECTION C									
J. D. and Telescope	W Sgr Phase	W Sgr Mag.	X Sgr Phase	X Sgr Mag.	J. D. and Telescope	W Sgr Phase	W Sgr Mag.	X Sgr Phase	X Sgr Mag.	J. D. and Telescope	W Sgr Phase	W Sgr Mag.	X Sgr Phase	X Sgr Mag.	J. D. and Telescope	W Sgr Phase	W Sgr Mag.	X Sgr Phase	X Sgr Mag.
20932.85f	1.10	5.16	2.06	5.32	21044.67e	6.59	5.16	1.70	5.32	20934.90q	3.15	6.03	4.11	5.72	21047.67f	1.99	5.32	4.70	5.80
20949.84q	2.90	5.80	5.02	5.64	21049.63f	3.95	5.92	6.66	5.32	20964.83e	2.70	5.32	5.99	5.91	21050.64f	4.96	6.15	0.66	5.32
20973.81q	4.08	5.80	0.95	5.24	21062.59f	1.72	5.32	5.60	6.02	20990.76f	5.84	6.03	3.88	5.91	21062.63f	1.76	5.32	5.64	5.85
20994.80f	2.29	5.24	0.91	5.48	21063.63f	2.76	5.97	6.64	5.16	20995.74f	3.23	5.92	1.85	5.48	21064.62q	3.75	6.03	0.62	4.68
21005.75q	5.64	5.92	4.85	5.72	21066.59f	5.72	6.03	2.59	5.64	21006.76f	6.65	5.16	5.86	5.48	21077.60f	1.54	5.64	6.58	5.00
21006.79f	6.68	5.48	5.89	5.48	21077.62q	1.56	5.64	6.60	5.32	21007.74f	0.04	5.16	6.84	5.00	21091.55e	0.30	4.84	6.51	5.64
21007.78f	0.08	5.00	6.88	5.00	21105.56q	6.72	5.64	6.50	5.64	21009.77f	2.07	5.32	1.85	5.32	21123.52q	1.89	5.48	3.43	5.48
21010.74q	3.04	5.72	2.82	5.48	21129.52q	0.30	4.68	2.41	5.48	21011.71f	4.01	5.92	3.79	5.85	21133.52q	4.30	6.03	6.41	5.32
21011.76f	4.06	6.15	3.84	5.91	21135.49f	6.27	5.92	1.37	4.84	21012.72f	5.02	6.15	4.80	5.85	21135.52f	6.30	5.80	1.40	5.00
21013.72f	6.02	5.92	5.80	5.96	21136.51f	7.29	4.60	2.39	5.48	21016.74q	1.44	5.48	1.81	5.16	21137.53f	0.71	5.16	3.41	5.48
21018.75f	3.45	5.64	3.82	5.64	21154.50f	2.50	5.32	6.36	4.84	21021.76f	6.46	5.64	6.83	5.16	21155.51f	3.51	5.48	0.36	5.00
21025.73f	2.84	5.32	3.79	5.64	21160.49f	0.89	5.32	...	...	21036.76q	6.27	5.92	0.80	5.32	21313.90q	2.40	5.64	4.50	5.72

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION B						SECTION C					
	W Sgr Phase	Mag.	X Sgr Phase	Mag.	W Sgr Phase	Mag.	J. D. and Telescope	X Sgr Phase	Mag.	W Sgr Phase	Mag.	
21318.84q	7.34	4.68	2.43	5.24	21437.56f	4.54	6.03	1.96	5.32			
21334.86q	0.58	5.32	4.43	5.64	21445.61q	5.00	6.26	3.00	5.48			
21344.84f	2.96	5.48	0.39	4.84	21447.58f	6.97	5.32	4.97	5.96			
21364.83f	0.17	5.16	6.36	5.16	21449.58f	1.37	5.32	6.97	4.84			
21365.73f	1.07	5.00	0.25	4.52	21452.57f	4.36	6.15	2.95	5.32			
21366.80q	2.14	5.56	1.32	5.00	21454.57f	6.36	5.48	4.95	5.64			
21368.73f	4.07	6.03	3.25	5.56	21456.54f	0.74	5.00	6.92	4.84			
21370.75f	6.09	6.26	5.27	6.04	21516.52f	7.55	5.00	3.80	5.64			
21372.70f	0.44	4.52	0.20	4.68	21523.51f	6.95	5.32	3.78	5.64			
21372.74f	0.48	4.52	0.24	5.00	21654.92q	0.38	5.16	1.98	5.32			
21391.75f	4.30	5.92	5.23	5.80	21670.88q	1.15	5.64	3.92	5.64			
21394.72f	7.27	5.00	1.19	5.00	21730.74q	0.25	5.32	0.68	5.00			
21397.70e	2.66	5.48	4.17	5.80	21731.76f	2.54	5.48	1.70	5.48			
21397.70f	2.66	5.32	4.17	5.64	21732.75f	3.53	6.03	2.69	5.16			
21407.68e	5.04	6.09	0.13	5.00	21748.63e	4.22	5.92	4.54	5.64			
21421.62f	3.79	5.92	0.05	4.68	21748.77q	4.36	6.03	4.68	5.64			
21424.58f	6.75	5.32	3.01	5.85	21749.75f	5.34	6.15	5.66	5.80			
21424.63f	6.80	5.64	3.06	5.85	21751.65f	7.24	4.68	0.55	5.16			
21425.58f	0.16	4.84	4.01	5.91	21757.74q	5.73	6.03	6.64	5.32			
21426.59f	1.17	5.16	5.02	5.91	21776.65f	1.86	5.32	4.52	5.96			
21427.58f	2.16	5.32	6.01	5.64	21786.60f	4.21	5.92	0.45	5.16			
21427.62f	2.20	5.32	6.05	5.80	21787.61f	5.22	6.15	1.46	4.84			
21430.60f	5.18	6.03	2.02	5.48	21788.63f	6.24	6.03	2.48	5.16			
21431.58f	6.16	5.48	3.00	5.48	21789.59f	7.20	5.00	3.44	5.64			

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TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS—*Cont.*

J. D. and Telescope	SECTION B						SECTION C					
	W Sgr Phase	W Sgr Mag.	X Sgr Phase	X Sgr Mag.	J. D. and Telescope	W Sgr Phase	W Sgr Mag.	J. D. and Telescope	W Sgr Phase	W Sgr Mag.	J. D. and Telescope	
21801.61q	4.03	5.64	4.40	5.91	22083.86f	5.27	6.38	3.24	5.96	5.96	22083.86f	
21804.58f	7.00	5.48	4.40	5.64	22104.78q	3.40	5.80	3.12	5.48	5.48	22104.78q	
21804.62q	7.04	5.48	4.44	5.64	22133.64f	1.88	5.32	3.94	5.48	5.48	22133.64f	
21806.57f	1.40	5.48	6.39	5.48	22138.67e	6.91	5.48	1.96	5.48	5.48	22138.67e	
21806.66f	1.49	5.16	6.48	5.16	22161.55f	7.01	5.00	3.81	5.85	5.85	22161.55f	
21807.62q	...	...	0.43	5.32	22161.59f	7.05	4.84	3.85	5.99	5.99	22161.59f	
21810.58f	5.41	6.26	3.39	5.64	22164.55f	2.41	5.64	6.81	5.32	5.32	22164.55f	
21812.59f	7.42	5.00	5.40	5.64	22165.54f	3.40	5.92	0.78	5.32	5.32	22165.54f	
21818.51f	5.74	6.38	...	...	22166.51f	4.37	6.09	1.75	5.32	5.32	22166.51f	
21818.58f	5.81	6.15	4.38	5.91	22169.61q	7.47	4.76	...	...	...	22169.61q	
21819.55f	6.78	5.32	5.35	5.64	22191.59f	6.67	5.56	5.80	6.07	6.07	22191.59f	
21825.56q	5.20	6.03	4.35	6.02	22192.57f	0.05	4.52	6.78	5.56	5.56	22192.57f	
21833.59q	5.63	5.72	5.37	5.91	22197.56e	5.04	5.92	4.76	5.72	5.72	22197.56e	
21834.54f	6.58	5.48	6.32	5.56	22225.53f	2.63	5.92	4.68	6.07	6.07	22225.53f	
21834.60q	6.64	5.48	6.38	5.64	22514.66f	3.15	6.03	6.36	5.32	5.32	22514.66f	
21839.55q	4.00	5.92	4.32	5.72	22516.60f	5.09	6.03	1.29	5.32	5.32	22516.60f	
21847.57q	4.42	5.80	5.33	5.91	22520.63f	1.53	5.64	5.32	5.64	5.64	22520.63f	
21859.52q	1.18	5.16	3.25	5.48	22522.66q	3.56	5.80	0.34	4.84	4.84	22522.66q	
21866.51f	0.58	4.76	3.23	5.48	22523.60f	4.50	5.80	1.28	5.16	5.16	22523.60f	
21867.51f	1.58	5.48	4.23	5.91	22573.51f	1.25	5.48	2.11	5.64	5.64	22573.51f	
22070.78e	7.38	4.52	4.18	5.48	22580.51f	0.65	5.32	2.10	5.32	5.32	22580.51f	
22071.79e	0.79	4.84	5.19	5.96	22580.56f	0.70	5.24	2.15	5.48	5.48	22580.56f	
22072.83q	1.83	5.64	6.23	5.64	22843.73e	5.64	5.92	5.90	5.64	5.64	22843.73e	
22076.80q	5.80	6.15	3.19	5.32	22843.73q	5.64	6.15	5.90	5.96	5.96	22843.73q	

TWENTY-FIVE SOUTHERN CEPHEID VARIABLE STARS

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION B						X Sgr					
	W Sgr Phase	W Sgr Mag.	X Sgr Phase	X Sgr Mag.	J. D. and Telescope	W Sgr Phase	W Sgr Mag.	J. D. and Telescope	W Sgr Phase	W Sgr Mag.	X Sgr Phase	X Sgr Mag.
22846.74q	1.06	5.64	1.90	5.16	23199.78f	4.73	5.97	4.38	5.80	...	...	...
22855.73q	2.45	5.64	3.88	5.48	23202.80q	0.15	4.84	0.39	5.16	...	...	...
22905.61q	6.76	5.92	4.68	5.64	23204.83q	2.18	5.16	2.42	5.64	...	...	...
22910.59e	4.15	5.92	2.65	5.64	23205.65f	3.00	5.48	3.24	5.91	...	...	...
22935.53f	6.30	5.48	6.56	5.64	23206.69f	4.04	6.15	4.28	6.07	...	...	...
23168.87q	4.20	5.72	1.52	5.24	23209.72f	7.07	5.16	...	...	...	...	...
23169.77f	5.10	6.03	2.42	5.16	23222.72f	4.88	6.38	...	...	...	...	...
23169.82q	5.15	6.15	2.47	5.48	23225.70f	0.27	5.00	2.26	5.32	...	...	...
23172.83f	0.56	5.00	5.48	5.91	23228.66q	3.23	6.03	...	...	...	...	...
23172.88f	0.61	5.00	5.53	5.96	23229.79q	4.36	5.80	6.35	5.96	...	...	...
23175.83q	3.56	5.72	1.47	5.00	23232.64q	7.21	4.68	2.19	5.00	...	...	...
23175.84e	3.57	5.64	1.48	5.48	23233.66f	0.63	4.76	3.21	5.64	...	...	...
23176.83f	4.56	5.80	2.47	5.32	23235.68f	2.65	5.48	5.23	5.96	...	...	...
23177.83f	5.56	5.92	3.47	5.64	23237.63f	4.60	6.03	0.17	5.32	...	...	...
23178.81f	6.54	5.32	4.45	5.96	23239.67f	6.64	5.48	2.21	5.32	...	...	...
23179.70f	7.43	4.84	5.34	5.96	23248.59f	0.37	5.16	4.12	5.96	...	...	...
23180.81q	0.95	5.16	6.45	5.00	23250.70q	2.48	5.32	6.23	5.32	...	...	...
23180.82f	0.96	5.48	...	...	23251.64q	3.42	5.92	0.16	5.00	...	...	...
23181.77f	1.91	5.48	0.40	5.32	23253.61f	5.39	6.26	2.13	5.48	...	...	...
23181.82f	1.96	5.32	0.45	5.32	23257.60q	1.79	5.32	6.12	5.48	...	...	...
23193.77f	6.31	5.92	5.39	5.91	23258.59q	2.78	5.32	0.09	5.32	...	...	...
23194.75f	7.29	5.32	...	...	23262.61f	6.80	5.48	4.11	5.80	...	...	...
23194.81q	7.35	4.84	6.43	5.48	23265.58f	2.17	5.32	0.07	5.48	...	...	...
23198.77f	3.72	5.80	3.37	5.64	23267.55f	4.14	5.92	2.04	5.48	...	...	...

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TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION B										SECTION C									
J. D. and Telescope	W Sgr	X Sgr	J. D. and Telescope	W Sgr	X Sgr	J. D. and Telescope	W Sgr	X Sgr	J. D. and Telescope	W Sgr	X Sgr	J. D. and Telescope	W Sgr	X Sgr	J. D. and Telescope	W Sgr	X Sgr		
23267.59f	4.18	6.03	2.08	5.32	23535.69f	6.46	5.48	3.76	5.64	23267.60q	4.19	5.80	2.09	5.16	23535.78f	6.55	5.92	3.85	5.48
23268.57f	5.16	6.15	3.06	5.48	23546.79e	2.37	5.32	0.84	5.64	23268.61f	5.20	6.15	3.10	5.48	23561.73f	2.12	5.32	1.75	5.32
23272.54f	1.54	5.32	... 2.99	5.91	23575.77f	0.97	5.16	1.77	4.68	23273.51f	4.51	6.15	3.99	5.96	23576.78f	1.98	5.16	2.78	5.80
23276.51f	5.51	6.15	3.99	5.96	23587.65q	5.25	6.15	6.64	4.56	23276.55f	5.55	6.03	... 5.96	5.96	23589.73q	7.33	4.68	1.71	4.84
23277.52f	6.52	5.92	5.00	6.07	23601.59e	4.00	6.15	6.56	4.68	23280.53f	1.93	5.48	1.00	5.16	23605.68q	0.50	4.84	3.64	5.64
23305.56q	4.18	5.80	5.00	5.85	23609.73q	4.55	5.80	0.68	4.84	23306.51f	5.13	6.38	... 5.96	5.96	23610.62f	5.44	6.15	1.57	5.08
23306.53q	5.15	5.92	5.97	5.96	23616.64f	3.86	5.80	0.58	5.32	23307.54q	6.16	5.80	6.98	5.64	23641.60f	6.04	5.92	4.50	5.80
23309.52q	0.54	5.00	1.95	4.92	23641.63q	6.07	5.48	4.53	5.64	23311.52f	2.54	5.80	3.95	5.64	23642.59q	7.03	5.48	5.49	5.64
23311.52q	2.54	5.48	3.95	5.64	23645.60q	2.44	5.32	1.49	5.00	23313.51q	4.53	5.80	5.94	5.64	23664.56f	6.21	6.15	6.43	5.91
23314.51q	5.53	5.92	6.94	5.48	23903.83q	2.44	5.48	0.31	5.32	23319.52q	2.95	5.48	4.93	5.64	23947.72q	0.76	5.16	2.13	5.32
23324.56q	0.39	4.52	2.96	5.96	23974.69q	4.95	6.03	1.06	4.84	23346.52f	7.16	5.32	3.89	6.07	23985.59e	0.66	5.00	4.95	5.80
23348.57e	4.83	6.15	0.96	5.16	24000.64q	0.52	4.52	5.97	5.96	23533.74f	4.51	5.98	1.81	5.48	24233.90e	5.93	5.64	0.85	5.16

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION B						SECTION B						SECTION B					
J. D. and Telescope	W Sgr Phase	Mag.	X Sgr Phase	Mag.	J. D. and Telescope	W Sgr Phase	Mag.	X Sgr Phase	Mag.	J. D. and Telescope	W Sgr Phase	Mag.	X Sgr Phase	Mag.	J. D. and Telescope	W Sgr Phase	
24241.84e	6.28	5.48	1.78	5.48	24659.75q	6.46	6.03	6.03	5.48	24246.88q	3.72	5.80	6.82	5.48	24670.80q	2.32	5.00
24247.84e	4.68	6.38	0.77	4.68	24676.73q	0.66	5.32	1.98	5.32	24256.81e	6.06	5.80	2.73	5.32	24678.74q	2.67	5.64
24274.78e	1.24	5.48	6.68	5.16	24679.68q	3.61	5.92	3.99	5.64	24275.80e	2.26	5.48	0.69	5.64	24683.66q	0.00	4.68
24298.74q	2.42	5.80	2.59	5.64	24683.77q	0.11	4.68	2.01	5.16	24314.69e	3.18	5.64	4.52	5.64	24688.68e	5.02	5.92
24314.74q	3.23	5.80	4.57	5.64	24695.59e	4.33	6.26	... .	...	24315.71e	4.20	5.80	5.54	5.64	24697.68e	6.42	5.16
24322.69q	3.58	6.15	5.51	5.64	24697.70q	6.44	5.64	1.92	4.84	24328.68q	1.98	5.48	4.49	5.64	24700.66q	1.80	5.64
24332.67q	5.97	6.26	1.47	5.16	24709.73q	3.28	5.64	6.94	5.64	24332.68e	5.98	5.64	1.48	5.16	24716.64q	2.59	5.48
24334.74q	0.44	4.68	3.54	5.91	24766.58q	6.96	4.68	... .	...	24343.69q	1.80	5.64	5.48	5.72	24770.53q	3.32	5.48
24352.66q	3.17	5.64	0.42	5.32	24770.58q	3.37	5.80	4.88	5.96	24626.79q	3.88	6.15	1.12	4.68	24780.52q	5.71	6.03
24640.80e	2.70	5.48	1.11	5.48	24943.89q	1.99	5.32	0.60	5.32	24640.83q	2.73	5.48	1.14	5.00	24999.78q	4.72	6.15
24644.74q	6.64	5.92	5.05	5.80	25033.74q	0.70	5.32	1.42	5.32	24648.81q	3.12	5.64	2.11	5.00	25037.73q	4.69	5.92
24656.72e	3.43	5.64	3.00	5.91	25062.69q	6.87	5.32	2.33	5.00	24656.74q	3.45	5.92	... .	...	25065.67q	2.25	5.80

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION B				SECTION B				
	W Sgr Phase	W Sgr Mag.	X Sgr Phase	X Sgr Mag.	J. D. and Telescope	W Sgr Phase	W Sgr Mag.	X Sgr Phase	
25086.62q	0.42	4.68	5.22	5.80	25741.81q	2.44	5.32	1.37	4.68
25087.62q	1.42	5.64	6.22	5.32	25742.81q	3.44	5.64	2.37	5.00
25096.65q	2.75	5.64	1.23	4.68	25765.68e	3.53	6.03	4.20	5.91
25097.63q	3.83	5.80	2.21	5.00	25767.79q	5.64	5.92	6.31	5.64
25108.64q	7.25	4.68	6.21	5.64	25773.78q	4.03	5.80	5.29	5.80
25118.60q	2.02	5.16	2.15	5.48	25779.71q	2.37	5.64	4.21	5.64
25132.63q	0.76	5.40	2.06	5.16	25790.64e	5.70	5.92	1.12	5.16
25333.95q	4.71	5.92	0.15	5.00	25793.70q	1.17	5.48	4.18	5.64
25354.84q	2.81	5.72	...	...	25797.70q	5.17	5.92	1.17	4.68
25379.78q	4.97	5.92	3.92	5.64	25800.66q	0.53	4.68	4.13	5.64
25409.74q	4.55	6.03	5.83	5.48	25801.63q	1.50	5.32	5.10	5.64
25413.66q	0.88	4.84	2.74	5.32	25807.68q	7.55	4.68	4.14	5.64
25436.65q	1.08	5.32	4.70	5.64	25808.68q	0.96	5.32	5.14	5.72
25444.64q	1.48	5.64	5.68	5.64	25826.60e	3.69	5.80	2.02	5.64
25452.58q	1.82	5.48	6.60	5.80	25826.62q	3.71	5.64	2.04	5.24
25521.63q	2.42	5.48	5.44	5.64	25830.63q	0.12	4.36	6.05	5.64
25712.83q	3.84	5.92	0.43	5.00	25850.55q	4.85	6.15	4.94	5.64
25739.77e	0.40	5.32	6.34	5.32	25876.52q	0.44	4.84	2.86	5.16
25739.80q	0.43	4.68	6.37	5.64					

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION B						SECTION B					
	RV Sco	Phase	Mag.	RY Sco	Phase	Mag.	J. D. and Telescope	RV Sco	Phase	Mag.	RY Sco	Phase
14862.62f	0.40	7.23	12.48	9.53	16683.52f	2.87	8.03	5.10	8.73			
14904.57f	5.98	7.23	13.80	9.71	16697.67f	4.89	8.03	19.25	8.83			
15148.72f	1.61	7.61	...	...	16943.84f	2.55	7.96	1.34	8.53			
15532.70f	3.72	8.16	12.19	9.53	16988.80f	3.26	7.96	5.99	9.04			
15634.57f	2.54	7.80	12.49	9.71	16979.77f	2.11	7.71	16.96	9.34			
15872.81f	4.39	8.22	6.96	9.09	17004.65f	2.74	8.03	1.21	8.34			
15885.83f	5.29	7.61	19.98	8.53	17009.77f	1.80	7.61	6.33	8.93			
15897.70f	5.03	7.96	11.53	9.62	17032.77f	0.55	7.23	9.01	9.24			
15933.68f	...	...	6.89	9.04	17076.67f	2.02	7.71	12.29	9.62			
15934.65f	5.61	7.32	7.86	9.14	17105.61f	0.66	7.23	0.60	8.43			
15940.64f	5.54	7.52	13.85	9.62	17335.80f	0.51	7.42	7.33	9.14			
16023.57f	3.61	8.09	15.52	9.62	17360.72f	1.19	7.52	11.94	9.53			
16241.73f	3.56	8.16	10.22	9.34	17384.72f	0.94	7.42	15.62	9.62			
16253.71f	3.42	8.09	1.89	8.53	17403.72f	1.76	7.61	14.31	9.44			
16297.69f	4.97	7.96	5.24	8.93	17447.57f	3.18	8.03	17.53	9.29			
16308.64f	3.80	8.16	16.19	9.53	17465.57f	2.99	8.09	15.22	9.62			
16311.63f	0.72	7.32	19.18	8.93	17495.54f	2.66	7.96	4.56	8.78			
16319.54f	2.57	7.96	6.78	9.14	17703.90f	4.93	7.80	9.78	9.24			
16376.62f	5.10	7.71	2.92	8.53	17758.72f	5.19	7.71	3.65	8.53			
16533.79f	4.06	8.09	16.94	9.34	17774.72f	3.01	8.03	19.65	8.53			
16608.89f	0.97	7.52	11.73	9.44	17787.64f	3.81	8.22	12.26	9.62			
16636.77f	4.61	8.09	19.30	8.83	17813.55f	5.47	7.32	17.86	9.34			
16650.72f	0.37	7.23	12.93	9.53	17820.55f	0.35	7.04	4.54	8.83			
16663.80f	1.33	7.61	5.70	8.88	18027.89f	1.61	7.61	8.74	9.34			

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

## TWENTY-FIVE SOUTHERN CEPHEID VARIABLE STARS

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J. D. and Telescope	SECTION B			SECTION B			SECTION B			
	RV Sco Phase	Mag.	RY Sco Phase	Mag.	J. D. and Telescope	RV Sco Phase	Mag.	J. D. and Telescope	RY Sco Phase	Mag.
18042.86f	4.45	8.16	3.40	8.63	19233.66f	1.15	7.32	15.98	9.44	...
18069.86f	1.14	7.61	10.08	9.53	19241.61f	3.03	8.03	...	...	...
18111.78f	0.63	7.32	11.37	9.44	19264.60f	1.78	7.80	6.29	9.14	...
18148.66f	1.14	7.52	7.63	9.04	19300.50f	1.31	7.52	1.56	8.53	...
18156.61f	3.03	8.09	15.58	9.34	19311.53f	...	...	12.59	9.53	...
18199.56f	3.55	8.09	17.90	9.24	19342.85f	1.20	7.52	0.14	8.53	...
18209.53f	1.40	7.61	7.55	9.24	19345.81f	4.16	8.09	3.10	8.58	...
18438.84f	...	...	...	...	19361.72f	1.89	7.80	19.01	8.68	...
18453.80f	3.21	7.96	8.05	9.24	19362.69f	2.86	8.03	19.98	8.53	...
18472.69f	3.92	8.16	6.63	9.09	19372.70f	0.75	7.23	9.68	9.44	...
18499.71f	0.63	7.13	13.35	9.62	19393.71f	3.57	8.09	10.37	9.44	...
18500.72f	1.64	7.52	14.36	9.53	19601.64f	5.44	7.52	18.30	9.14	...
18501.59f	2.51	7.90	15.23	9.39	19603.65f	1.39	7.61	0.00	8.35	...
18506.68f	1.54	7.52	0.00	8.15	19604.55f	2.29	7.80	0.90	8.53	...
18531.61f	2.22	7.71	4.61	8.93	19632.58f	0.01	7.04	8.61	9.44	...
18565.53f	5.83	7.13	18.21	9.14	19645.63f	0.94	7.52	...	...	...
18820.82f	0.48	7.23	9.42	9.34	19650.65f	5.96	7.04	6.37	9.04	...
18821.79f	1.45	7.61	10.39	9.39	19657.56f	0.75	7.23	13.28	9.71	...
18848.63f	4.05	8.28	16.92	9.44	19839.88f	2.73	7.90	1.83	8.53	...
18855.75f	5.11	7.71	3.72	8.78	19898.87f	5.66	7.13	10.82	9.39	...
18859.70f	2.99	8.16	7.67	9.24	19912.80f	1.41	7.52	4.44	8.83	...
18884.63f	3.68	8.09	12.29	9.62	19922.82f	5.36	7.52	14.46	9.53	...
18919.54f	2.22	7.80	6.57	9.14	19931.66f	2.08	7.71	2.98	8.73	...
19204.74f	2.53	7.80	7.37	9.14	19942.76f	1.06	7.61	14.08	9.53	...

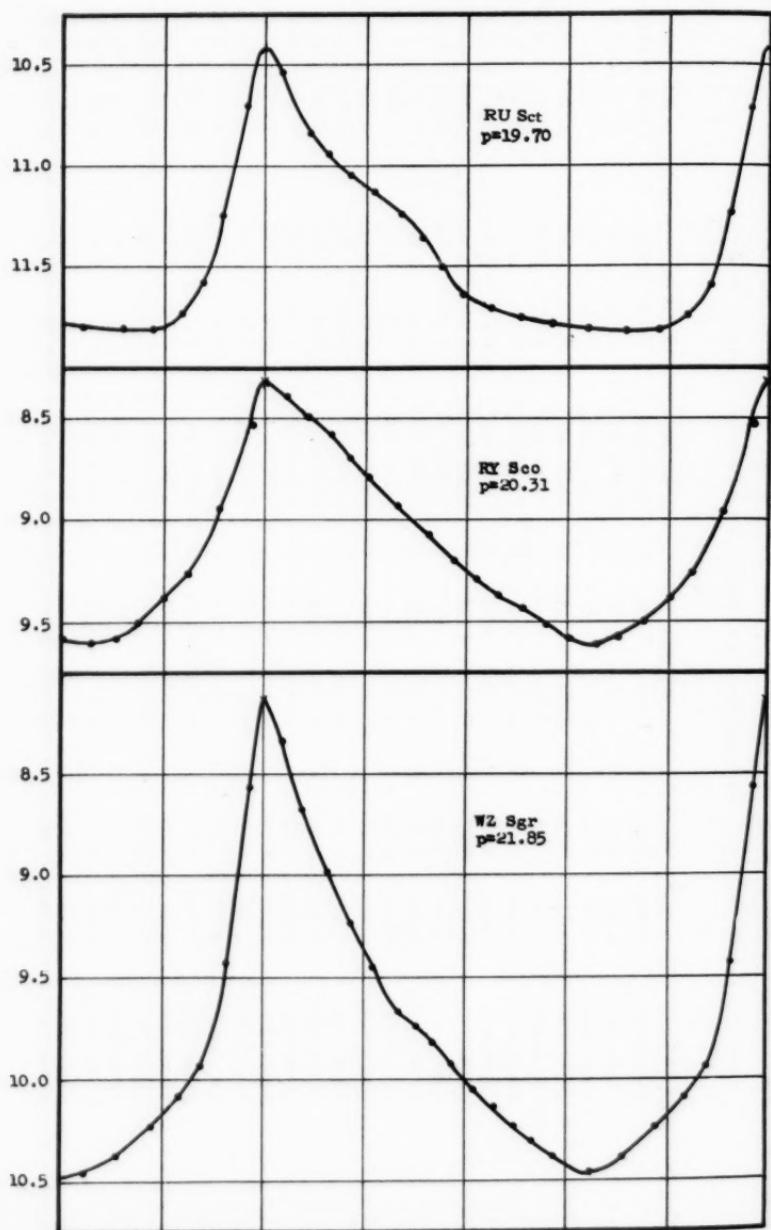


TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Contd.*

J. D. and Telescope	SECTION B						SECTION C					
	RV Sco	Phase	Mag.	RY Sco	Phase	Mag.	RV Sco	Phase	Mag.	RY Sco	Phase	Mag.
19947.72f	6.02	7.23	19.04	8.73	20384.53f	0.34	7.04	8.94	9.34			
19950.71f	2.95	7.96	1.72	8.53	20414.54f	0.05	6.94	18.64	9.19			
19951.72f	3.96	8.09	2.73	8.58	20681.71f	0.51	7.23	1.41	8.43			
19959.58f	5.76	7.23	10.59	9.34	20688.71f	1.45	7.61	8.41	9.44			
19961.60f	1.71	7.71	12.61	9.71	20691.62f	4.36	8.22	11.32	9.53			
19973.51f	1.50	7.61	4.20	8.73	20695.66f	2.34	7.80	15.36	9.44			
19977.67f	5.66	7.32	8.36	9.24	20747.52f	5.71	7.13	6.28	9.04			
19985.52f	1.39	7.52	16.21	9.34	20769.48f	3.42	8.22	7.92	9.24			
19989.52f	5.39	7.52	20.21	8.43	21006.79f	4.34	8.16	1.46	8.29			
20012.57f	4.19	8.22	2.64	8.53	21007.78f	5.33	7.71	2.45	8.48			
20013.56f	5.18	7.71	3.63	8.73	21009.83f	1.32	7.61	4.50	8.93			
20044.57f	5.89	7.04	14.32	9.53	21011.76f	3.25	8.03	6.43	9.04			
20297.67f	4.41	8.09	3.34	8.58	21048.68f	3.80	8.03	2.72	8.43			
20306.74f	1.35	7.52	12.41	9.57	21062.63f	5.63	7.32	16.67	9.44			
20307.56f	2.17	7.90	13.23	9.62	21063.63f	0.56	7.04	17.67	9.39			
20328.60f	5.03	7.76	13.95	9.48	21066.63f	3.56	8.09	0.36	8.15			
21329.69f	0.06	7.04	15.04	9.53	21135.52f	5.78	7.04	8.31	9.44			
20330.67f	1.04	7.52	16.02	9.44	21137.53f	1.73	7.61	10.32	9.44			
20337.66f	1.97	7.71	2.70	8.58	21364.83f	4.75	8.03	14.16	9.71			
20338.58f	2.89	8.03	3.62	8.63	21424.63f	3.94	8.16	13.02	9.62			
20354.58f	0.70	7.32	19.62	8.73	21427.62f	0.87	7.23	16.01	9.53			
20366.58f	0.58	7.13	11.31	9.53	21788.63f	4.25	8.09	11.37	9.58			
20367.59f	1.59	7.71	12.32	9.53	21806.66f	4.10	8.09	9.08	9.34			
20372.62f	0.56	7.23	17.35	9.44	22166.51f	0.26	7.23	3.28	8.53			

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION B											
J. D. and Telescope	RV Sco Phase	Mag.	RV Sco Phase	Mag.	RV Sco Phase	Mag.	J. D. and Telescope	RV Sco Phase	Mag.	RV Sco Phase	Mag.
22225.53f	4.73	8.09	1.36	8.53	0.97	7.52	17.37	9.24	...	...	...
22516.60f	4.85	8.16	8.03	9.14	22888.58f	0.72	7.13	5.69	8.83	...	...
22854.72f	3.53	8.09	0.81	8.35	23206.51f	0.72	7.13	5.69	8.83	...	...
22905.59f	5.91	7.32	11.05	9.53	23311.52f	...	...	10.70	9.34	...	...
23172.88f	0.44	6.94	14.26	9.53	23346.52f	4.36	8.09	5.07	8.73	...	...
23176.82f	4.38	8.03	18.20	9.14	23533.83f	3.76	8.03	9.55	9.29	...	...
23179.70f	1.20	7.52	0.76	8.29	23535.78f	5.71	7.23	11.50	9.44	...	...
23181.82f	3.32	8.16	2.88	8.43	23561.73f	...	...	17.14	9.34	...	...
23193.78f	...	...	14.84	9.71	23575.77f	3.27	8.03	10.86	9.62	...	...
23194.75f	4.12	8.09	15.81	9.44	23576.78f	4.28	8.16	...	...	...	...
23199.78f	3.09	7.96	0.53	8.53	23610.62f	...	...	5.08	8.73	...	...
23205.65f	2.80	8.03	6.40	8.88	23662.53f	5.17	7.61	16.37	9.24	...	...
23209.72f	0.91	7.32	10.47	9.34	23664.56f	1.14	7.61	18.40	9.04	...	...
23219.63f	4.76	8.03	0.06	8.29	23900.87z	1.06	7.23	10.94	9.39	...	...
23221.65f	0.72	7.42	2.08	8.35	23905.83z	6.02	7.13	15.90	9.34	...	...
23222.72f	1.79	7.52	3.15	8.68	23909.86z	3.98	8.03	19.93	8.48	...	...
23233.67f	0.61	7.23	14.10	9.53	23919.79z	1.79	7.71	9.54	9.53	...	...
23235.68f	2.62	7.96	16.11	9.44	23959.58z	5.21	7.61	8.70	9.24	...	...
23237.63f	4.57	8.03	18.06	9.04	23964.70z	4.27	8.09	13.82	9.53	...	...
23248.59f	3.41	7.96	8.71	9.34	23965.71z	5.28	7.52	14.83	9.53	...	...
23253.61f	2.37	7.80	13.73	9.53	23969.70z	...	...	18.82	9.04	...	...
23267.54f	4.18	8.16	7.34	9.14	23974.61z	2.06	7.61	3.42	8.63	...	...
23268.58f	5.22	7.71	8.38	9.14	23988.63z	3.96	8.03	17.44	9.04	...	...
23268.62f	5.26	7.61	8.42	9.14	23993.64z	2.90	7.96	2.14	8.53	...	...

SHAPLEY

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION B									
J. D. and Telescope	RV Sco Phase	RV Sco Mag.	RV Sco Phase	RV Sco Mag.	J. D. and Telescope	RV Sco Phase	RV Sco Mag.	J. D. and Telescope	RV Sco Phase
24019.53z	4.55	8.03	7.71	9.24	24648.77z	3.40	8.03	...	...
24020.57z	5.59	7.52	8.75	9.34	24706.71z	...	...	4.21	8.73
24023.58z	2.54	7.80	11.76	9.34	24727.64z	...	...	4.83	8.93
24033.57z	0.40	7.23	1.44	8.29	24731.64z	1.41	7.61	8.83	9.24
24035.54z	2.37	7.96	3.41	8.73	24739.58z	...	...	16.77	9.14
24285.79z	4.11	8.16	9.89	9.34	24754.51z	0.04	7.13	11.38	9.34
24290.74z	2.99	8.03	...	...	24759.52z	5.05	7.96	16.39	9.14
24299.66z	5.85	7.32	3.44	8.73	24787.56z	2.78	8.03	3.80	8.68
24300.80z	0.93	7.52	4.55	8.83	24794.53z	3.69	8.09	...	...
24325.74z	1.63	7.61	9.21	9.24	25154.25z	5.78	7.23	4.84	8.83
24374.57z	1.96	7.52	17.41	9.14	25355.60z	1.04	7.42	3.05	8.73
24404.52z	1.61	7.61	6.73	8.93	25386.48z	1.62	7.61	...	...
24432.53z	5.37	7.61	14.43	9.73	25389.60z	4.74	7.96	16.73	9.24
24623.85z	2.73	7.96	2.61	8.43					

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION C									
J. D. and Telescope	S Nor Phase	S Nor Mag.	J. D. and Telescope	S Nor Phase	J. D. and Telescope	S Nor Phase	J. D. and Telescope	S Nor Phase	S Nor Mag.
15274.58f	0.77	7.27	17039.56f	0.46	7.35	18187.57f	7.37	7.44	
15519.62f	1.98	7.48	17069.62f	1.26	7.27	18361.89f	6.39	7.82	
15590.66f	4.75	7.82	17094.59f	6.73	7.73	18467.76f	4.73	7.82	
15646.54f	2.11	7.64	17297.84f	5.16	7.90	18507.70f	5.66	7.82	
15872.89f	4.15	7.77	17352.83f	1.64	7.31	18533.51f	2.21	7.60	
16183.87f	3.03	7.82	17376.80f	6.10	7.67	18856.73f	3.58	7.82	
16254.78f	5.67	7.88	17401.72f	1.76	7.27	18897.60f	5.44	7.82	
16288.60f	0.48	7.10	17464.56f	6.08	7.69	18917.60f	5.93	7.86	
16310.73f	3.10	7.73	17499.52f	2.03	7.64	19177.81f	2.81	7.73	
16311.59f	3.96	7.86	17738.79f	7.23	7.69	19180.80f	5.80	7.86	
16359.56f	3.17	7.73	17758.76f	7.70	7.40	19239.59f	6.08	7.90	
16558.87f	7.42	7.48	17772.74f	2.17	7.44	19312.52f	0.98	7.35	
16563.76f	2.56	7.54	17803.61f	3.78	7.82	19575.69f	0.82	7.40	
16593.75f	3.29	7.86	17835.54f	6.45	7.82	19595.71f	1.34	7.23	
16604.74f	4.52	7.90	17843.53f	4.69	7.86	19599.69f	5.32	7.77	
16607.80f	7.58	7.69	18026.88f	2.73	7.82	19648.57f	5.43	7.73	
16650.67f	1.69	7.35	18041.86f	7.96	7.40	19903.73f	7.01	7.56	
16653.61f	4.63	7.75	18070.79f	7.63	7.48	19917.79f	1.57	7.31	
16697.57f	9.58	7.13	18082.86f	0.19	7.13	19925.78f	9.56	7.31	
16706.60f	8.85	7.31	18102.56f	0.39	7.31	19942.85f	7.12	7.48	
16915.89f	3.58	7.82	18109.69f	7.52	7.56	19971.68f	6.69	7.69	
16968.75f	7.67	7.40	18145.57f	4.39	8.03	19974.63f	9.64	7.31	
17000.78f	0.69	7.10	18150.66f	9.48	7.27	19978.65f	3.91	7.73	
17032.82f	3.47	7.77	18159.52f	8.58	7.44	19985.61f	1.12	7.23	

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TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—Cont.

J. D. and Telescope	SECTION C			S Nor			S Nor		
	S Nor Phase	J. D. and Telescope	Phase	S Nor Mag.	J. D. and Telescope	Phase	S Nor Mag.	J. D. and Telescope	Phase
20012.53f	8.53	7.31	20654.74f	7.05	7.56	21037.63f	9.57	7.10	
20279.70f	2.62	7.73	20662.73f	5.28	7.86	21038.59f	0.78	7.35	
20282.80f	5.72	7.77	20667.66f	0.46	7.13	21047.72f	0.15	7.13	
20287.73f	0.90	7.35	20667.71f	0.51	7.40	21051.66f	4.09	7.82	
20294.67f	7.84	7.40	20669.69f	2.49	7.69	21078.54f	1.72	7.44	
20295.81f	8.98	7.27	20681.74f	4.79	7.90	21080.55f	3.73	7.77	
20313.74f	7.40	7.64	20690.69f	3.99	7.77	21081.54f	4.72	7.99	
20316.69f	0.60	7.31	20693.66f	6.96	7.52	21102.63f	6.30	7.73	
20325.73f	9.64	7.07	20695.68f	8.98	7.27	21332.84f	2.44	7.73	
20331.59f	5.74	7.82	20696.69f	0.23	7.31	21336.80f	6.40	7.60	
20336.68f	1.08	7.31	20708.67f	2.46	7.52	21337.78f	7.38	7.48	
20337.71f	2.11	7.42	20709.63f	3.42	7.73	21374.72f	5.31	7.73	
20352.58f	7.23	7.48	20719.56f	3.60	7.90	21382.66f	3.74	7.73	
20353.65f	8.30	7.31	20720.55f	4.59	7.77	21394.64f	5.72	7.90	
20355.61f	0.50	7.19	20749.63f	4.41	7.73	21396.65f	7.73	7.64	
20372.68f	7.82	7.44	20756.51f	1.53	7.40	21397.66f	8.62	7.40	
20373.57f	8.71	7.13	20960.78f	0.99	7.40	21424.54f	6.36	7.77	
20386.57f	2.21	7.40	20992.82f	3.77	7.73	21428.52f	0.59	7.40	
20392.57f	8.21	7.52	21009.81f	1.26	7.35	21431.50f	3.57	7.90	
20423.54f	0.16	7.27	21010.77f	2.22	7.44	21449.54f	2.10	7.77	
20594.88f	5.70	7.90	21016.65f	8.00	7.33	21453.50f	5.76	7.90	
20607.76f	8.83	7.44	21021.72f	3.41	7.90	21687.85f	6.34	7.66	
20608.82f	0.14	7.16	21022.68f	4.37	7.90	21731.68f	1.41	7.31	
20612.84f	4.16	7.77	21025.60f	7.29	7.48	21750.66f	0.88	7.27	

TWENTY-FIVE SOUTHERN CEPHEID VARIABLE STARS

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TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION C				SECTION C				SECTION C			
J. D. and Telescope	S Nor Phase										
21756.68f	6.90	7.73	23193.78f	0.56	7.27	23961.58z	7.63	7.48			
21757.67f	7.89	7.54	23194.51f	1.29	7.35	23966.53z	3.57	7.77			
21759.65f	0.12	7.19	23197.53f	4.31	7.73	23997.63z	4.67	7.90			
21776.58f	7.30	7.64	23199.78f	6.56	7.52	24024.58z	2.36	7.77			
21789.54f	0.75	7.31	23219.62f	6.90	7.56	24025.51z	3.29	7.82			
21790.54f	1.75	7.40	23219.67f	6.95	7.73	24245.82z	9.04	7.35			
21871.51f	4.70	7.77	23221.56f	8.84	7.13	24273.87z	7.83	7.44			
21874.52f	7.71	7.64	23222.69f	0.21	7.07	24294.69z	9.14	7.40			
22100.65f	9.52	7.13	23233.66f	1.43	7.31	24318.70z	3.89	7.86			
22108.62f	7.73	7.64	23250.68f	8.70	7.40	24327.63z	3.07	7.69			
22129.52f	9.13	7.31	23267.54f	6.05	7.60	24354.56z	0.74	7.44			
22133.59f	3.45	7.73	23268.57f	7.08	7.56	24357.59z	3.77	7.86			
22138.54f	8.40	7.35	23533.83f	9.01	7.31	24371.63z	8.06	7.48			
22140.60f	0.70	7.19	23575.77f	2.19	7.77	24375.50z	2.18	7.48			
22173.52f	4.36	7.82	23576.71f	3.13	7.73	24411.53z	8.95	7.35			
22175.56f	6.40	7.73	23610.62f	7.78	7.40	24433.52z	1.68	7.52			
22191.54f	2.88	7.73	23647.56f	5.71	7.73	24670.69z	4.78	7.86			
22194.51f	5.85	7.82	23648.55f	6.70	7.52	24704.62z	9.45	7.27			
22455.70f	3.71	7.73	23673.53f	2.42	7.44	24716.86z	2.18	7.69			
22483.72f	2.47	7.64	23902.87z	7.44	7.56	24755.51z	1.82	7.69			
22542.60f	2.83	7.69	23941.70z	7.26	7.48	25382.54z	4.86	7.86			

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TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION C			RW TrA			J. D. and Telescope			RW TrA		
	Phase	RW TrA Mag.	J. D. and Telescope	Phase	RW TrA Mag.	J. D. and Telescope	Phase	RW TrA Mag.	J. D. and Telescope	Phase	RW TrA Mag.	
11897.723b	0.011	10.91	15519.616f	0.122	11.43	16229.862f	0.076	11.35				
122586.819b	.134	11.35	15533.647f	.314	11.62	16241.763b	.008	10.91				
13000.738b	.371	10.74	15541.785f	.223	11.55	16254.777f	.305	11.62				
13024.617b	.311	11.58	15560.713f	.076	11.43	16286.589b	.324	11.55				
13054.594b	.366	11.00	15590.656f	.096	11.26	16310.727f	.149	11.62				
13292.770b	.281	11.71	15633.572f	.372	11.00	16311.588f	.262	11.62				
13292.801b	.312	11.71	15646.536f	.245	11.62	16338.647f	.017	10.91				
13435.533b	.163	11.62	15866.881b	.283	11.63	16359.562f	.360	11.00				
13661.775b	.114	11.43	15868.822f	.354	11.00	16360.619b	.295	11.68				
14067.802b	.313	11.65	15872.894f	.311	11.65	16379.549f	.149	11.43				
14382.799b	.372	10.74	15887.676f	.132	11.43	16582.864f	.363	10.91				
14528.593b	.292	11.62	15887.711b	.167	11.43	16593.749f	.027	10.86				
14753.806b	.336	11.52	15898.685f	.294	11.65	16604.743f	.174	11.52				
14795.733b	.371	10.74	15906.794f	.174	11.43	16605.820b	.129	11.43				
14851.516b	.049	11.04	15912.602b	.372	10.82	16605.844f	.153	11.43				
14874.641f	.358	11.35	15927.611b	.045	11.00	16607.801f	.239	11.58				
14875.550f	.145	11.43	15927.723f	.157	11.43	16625.729f	.214	11.55				
15116.877f	.219	11.52	15934.692f	.020	11.00	16636.725f	.363	11.00				
15148.681f	.230	11.68	15941.680b	.275	11.65	16650.672f	.096	11.43				
15162.693b	.029	10.96	15945.711f	.192	11.43	16653.614f	.046	11.17				
15267.530f	.136	11.26	15973.586f	.014	10.91	16667.610f	.203	11.55				
15288.657b	.141	11.35	15973.614b	.042	10.96	16680.531f	.033	10.91				
15485.579b	.049	11.13	16183.866f	.086	11.35	16697.566f	.236	11.62				
15486.749b	.171	11.39	16221.862f	.305	11.62	16745.538f	.332	11.43				

## TWENTY-FIVE SOUTHERN CEPHEID VARIABLE STARS

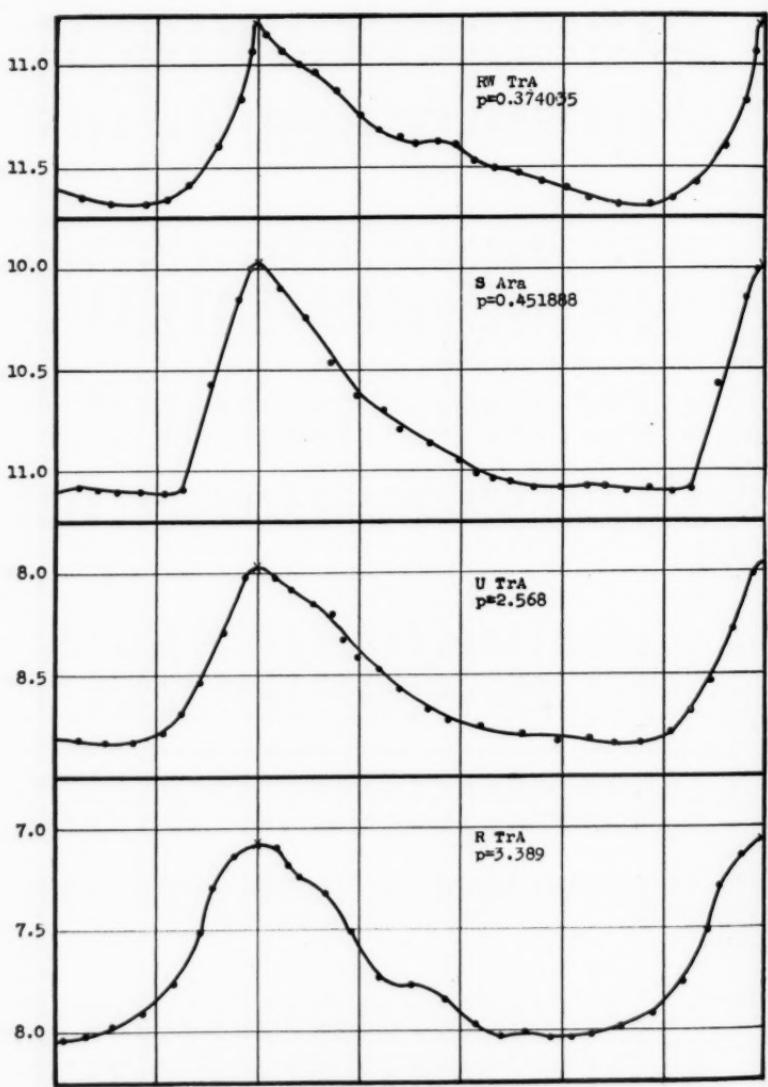


TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	RW TrA			SECTION C			RW TrA		
	Phase	Mag.	J. D. and Telescope	Phase	Mag.	J. D. and Telescope	Phase	Mag.	J. D. and Telescope
16780.556f	0.014	11.00	17704.721f	0.115	11.43	18494.735f	0.167	11.52	
16915.897b	.131	11.43	17738.792f	.148	11.62	18507.702f	.042	11.00	
16937.880f	.045	10.91	17758.765f	.298	11.62	18533.509f	.041	11.04	
16957.797f	.139	11.43	17772.744f	.063	11.26	18804.845f	.201	11.43	
16960.760f	.109	11.35	17803.607f	.255	11.68	18856.729f	.095	11.43	
16968.749f	.244	11.63	17835.535f	.016	10.82	18868.607b	.003	10.74	
16981.830f	.233	11.71	17843.530f	.157	11.52	18897.599f	.195	11.62	
17000.777f	.105	11.43	18026.882f	.231	11.65	18898.534b	.008	10.91	
17032.815f	.350	11.09	18041.859f	.247	11.65	18917.579f	.351	11.35	
17039.564f	.366	11.00	18070.788f	.001	10.91	19166.759f	.050	11.09	
17068.608b	.235	11.58	18082.861f	.105	11.43	19177.809f	.252	11.62	
17069.621f	.126	11.43	18102.560f	.354	11.35	19180.801f	.252	11.68	
17094.587f	.032	10.91	18109.690f	.004	10.78	19239.637f	.365	11.17	
17098.615f	.319	11.43	18145.565f	.345	11.26	19290.544f	.029	11.17	
17297.844f	.188	11.43	18150.656f	.200	11.43	19301.501f	.139	11.26	
17335.760f	.326	11.62	18159.521f	.088	11.35	19312.521f	.312	11.17	
17352.829f	.190	11.62	18187.565f	.079	11.26	19569.777f	.232	11.55	
17341.784f	.366	10.91	18361.891f	.105	11.26	19634.604f	.351	11.17	
17376.803f	.225	11.65	18404.872f	.072	11.17	19903.732f	.173	11.62	
17401.717f	.079	11.35	18434.777f	.054	11.00	19942.853f	.021	11.09	
17430.654f	.215	11.65	18451.703f	.149	11.62	20287.727f	.034	11.00	
17464.556f	.080	11.35	18457.657f	.118	11.43	20313.744f	.243	11.71	
17499.522f	.261	11.71	18467.757f	.119	11.43	20316.691f	.198	11.43	
17690.807f	.040	10.82	18481.634f	.157	11.62	20336.675f	.358	11.35	

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION C						SECTION C					
J. D. and Telescope	RW TrA Phase	RW TrA Mag.	J. D. and Telescope	RW TrA Phase	RW TrA Mag.	J. D. and Telescope	RW TrA Phase	RW TrA Mag.	J. D. and Telescope	RW TrA Phase	RW TrA Mag.
20372.548f	0.323	11.35	21332.840f	0.093	11.30	22191.541f	0.010	10.82			
20392.572f	.150	11.47	21336.805f	.318	11.58	22194.510f	.361	11.17			
20423.537f	.070	11.17	21337.783f	.174	11.58	22195.704f	.104	11.43			
20594.877f	.102	11.35	21374.707f	.068	11.35	22483.720f	.068	11.17			
20607.760f	.267	11.65	21392.664f	.072	11.35	22850.619f	.038	11.00			
20612.840f	.111	11.39	21397.663f	.208	11.52	23194.509f	.190	11.43			
20654.739f	.118	11.43	21424.538f	.153	11.43	23197.529f	.218	11.55			
20667.710f	.373	10.91	21428.515f	.015	11.09	23219.673f	.294	11.68			
20669.691f	.109	11.35	21431.500f	.008	10.91	23250.678f	.254	11.62			
20690.692f	.164	11.43	21449.536f	.090	11.26	23338.537f	.214	11.62			
20693.656f	.135	11.35	21687.850f	.144	11.35	23533.859f	.290	11.74			
20708.674f	.192	11.65	21731.676f	.208	11.52	23535.733f	.294	11.74			
20709.630f	.026	10.95	21756.682f	.154	11.58	23566.838f	.354	11.35			
20756.509f	.150	11.62	21757.671f	.021	10.91	23576.710f	.127	11.35			
21010.767f	.065	11.35	21776.584f	.232	11.71	23619.643f	.046	11.17			
21022.678f	.006	10.74	21789.541f	.098	11.35	23647.557f	.281	11.74			
21025.600f	.310	11.62	21790.536f	.345	11.35	23648.549f	.077	11.43			
21037.631f	.372	10.91	22100.654f	.013	11.00	23671.519f	.305	11.74			
21038.587f	.206	11.52	22108.620f	.125	11.47	23692.537f	.003	11.00			
21047.717f	.359	11.21	22129.515f	.074	11.43	23902.869z	.127	11.26			
21078.543f	.140	11.43	22133.593f	.037	11.09	23914.782z	.071	11.17			
21080.546f	.273	11.65	22140.595f	.307	11.65	23940.713z	.194	11.43			
21081.541f	.146	11.58	22173.520f	.317	11.58	23941.701z	.060	11.09			
21102.633f	.292	11.62	22175.561f	.113	11.43	23961.581z	.116	11.35			

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION C				RW TrA				J. D. and Telescope				RW TrA					
J. D. and Telescope	RW TrA	Phase	Mag.	J. D. and Telescope	RW TrA	Phase	Mag.	J. D. and Telescope	RW TrA	Phase	Mag.	J. D. and Telescope	RW TrA	Phase	Mag.		
23962.638z	0.051	11.17	24075.522z	0.350	11.43	24371.634z	0.227	11.55	23972.691z	.005	11.00	24245.820z	.088	11.43	24375.502z	.354	11.26
23996.531z	.281	11.74	24273.870z	.086	11.17	24433.522z	.025	11.09	23997.574z	.202	11.65	24318.703z	.034	11.17	24648.700z	.133	11.35
23997.632z	.260	11.74	24326.690z	.167	11.62	24670.694z	.058	11.17	24021.609z	.298	11.71	24327.650z	.359	11.26	24704.621z	.322	11.62
24024.576z	.273	11.65	24356.562z	.116	11.43	24716.859z	.217	11.55	24025.510z	.085	11.17	24357.589z	.021	11.21	25382.539z	.115	11.26
BF Oph				BF Oph				J. D. and Telescope				BF Oph					
J. D. and Telescope	BF Oph	Phase	Mag.	J. D. and Telescope	BF Oph	Phase	Mag.	J. D. and Telescope	BF Oph	Phase	Mag.	J. D. and Telescope	BF Oph	Phase	Mag.		
14757.84e	1.64	8.19	15148.73f	2.01	8.39	15842.81f	0.46	7.82	14812.70e	3.62	8.19	15842.87e	0.52	7.82	14861.59f	3.69	8.09
14862.62f	0.66	7.93	15527.68f	2.63	8.44	15872.81f	1.89	8.24	14874.55e	0.38	7.82	15532.66f	3.54	8.19	15873.81e	0.79	7.82
14892.58e	2.14	8.34	15532.70f	3.58	8.04	15879.76f	0.79	7.82	14904.52f	1.88	8.24	15540.69e	3.44	8.39	15885.83f	2.79	8.49
14904.57f	1.93	8.44	15543.71f	2.39	8.44	15896.73e	1.49	8.24	14928.52f	1.47	8.29	15551.69f	2.23	8.39	15897.61f	2.37	8.34
15108.88f	2.84	8.29	15591.58f	1.44	8.24	15897.70f	2.46	8.49	15116.83e	2.65	8.49	15609.60f	3.19	8.44	15898.73e	3.49	8.29
15119.82e	1.57	8.29	15613.57e	3.09	8.34	15911.72f	0.21	7.49	15147.69f	0.97	8.09	15634.57f	3.76	8.19	15914.54f	3.03	8.49

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	BF Oph		J. D. and Telescope		BF Oph		J. D. and Telescope	
	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.
15925.61f	1.89	8.44	16279.80f	2.17	8.39	16608.84f	1.70	8.14
15927.63f	3.91	7.60	16282.66e	0.96	8.14	16608.89f	1.75	8.44
15932.65e	0.80	8.14	16288.73f	2.96	8.39	16613.75e	2.54	8.54
15933.68f	1.83	8.39	16295.58f	1.68	8.39	16625.69f	2.28	8.44
15934.65f	2.80	8.44	16297.69f	3.79	7.93	16634.67f	3.12	8.39
15940.64f	0.65	7.93	16298.65f	0.68	7.71	16636.77f	1.15	7.93
15943.62e	3.63	8.19	16311.63f	1.45	8.39	16638.65f	3.03	8.34
15956.65f	0.39	7.60	16319.54f	1.23	8.09	16642.68e	2.99	8.54
16008.53f	3.45	8.34	16323.63f	1.25	7.98	16644.68e	0.92	7.98
16023.57f	2.22	8.49	16337.61f	3.03	8.54	16644.67f	0.93	7.93
16224.86e	0.11	7.82	16339.61f	0.96	7.93	16650.72f	2.90	8.49
16226.76f	2.01	8.34	16359.61f	0.62	7.82	16650.76f	2.94	8.44
16226.82e	2.07	8.39	16372.55f	1.35	8.19	16663.80f	3.77	7.82
16229.77f	0.95	8.24	16376.53f	1.27	7.93	16664.66f	0.57	7.82
16240.63f	3.67	7.93	16376.62f	1.36	8.39	16668.72f	0.56	7.82
16241.73f	0.71	7.82	16558.83f	0.51	7.82	16683.52f	3.15	8.44
16242.70f	1.68	8.14	16582.77f	0.04	7.60	16691.57f	3.07	8.34
16253.62f	0.40	7.60	16589.77f	2.97	8.59	16691.62f	3.12	8.54
16253.71f	0.49	7.93	16591.70f	0.83	8.29	16694.63f	2.06	8.39
16257.73e	0.44	7.60	16593.70f	2.83	8.44	16697.67f	1.03	8.14
16259.72e	2.43	8.54	16593.79f	2.92	8.49	16707.59f	2.82	8.44
16260.73e	3.44	8.44	16604.83f	1.76	8.24	16743.54f	3.15	8.44
16264.71f	3.35	8.34	16606.72f	3.65	8.19	16918.81f	2.50	8.59
16268.73f	3.30	8.34	16608.80f	1.66	8.34	16922.80f	2.42	8.54

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TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION C			J. D. and Telescope		
	BF Oph Phase	Mag.	J. D. and Telescope	BF Oph Phase	Mag.	BF Oph Phase
16934.87f	2.29	8.59	17034.63e	0.35	7.82	17403.63f
16935.87e	3.29	8.29	17075.57f	0.61	7.93	17403.72f
16938.83f	2.18	8.44	17076.67f	1.71	8.44	17404.62f
16939.85e	3.20	8.44	17077.56f	2.60	8.54	17408.62e
16943.84f	3.12	8.44	17077.65f	2.69	8.44	17430.57f
16944.86e	0.07	7.49	17097.54f	2.24	8.34	17431.57f
16960.80f	3.81	7.82	17105.61f	2.17	8.44	17437.56e
16968.80f	3.67	8.24	17107.57f	0.06	7.60	17445.55f
16972.84f	3.65	8.14	17241.88f	0.13	7.82	17447.57f
16976.74f	3.48	8.24	17319.82e	0.78	7.93	17448.52f
16979.69f	2.36	8.39	17325.80f	2.69	8.44	17465.52f
16979.77f	2.44	8.49	17329.72f	2.54	8.59	17465.57f
16988.74f	3.27	8.44	17335.67f	0.35	7.60	17482.52f
16988.79f	3.32	8.34	17335.80f	0.48	7.71	17495.54f
16989.73e	0.20	7.71	17343.82f	0.37	7.71	17686.81f
16991.77f	2.24	8.34	17360.73f	1.01	8.29	17703.90f
16999.69f	2.02	8.34	17371.74f	3.88	7.93	17705.85f
17004.61f	2.87	8.59	17372.67e	0.74	7.93	17713.64f
17004.65f	2.92	8.49	17374.70f	2.77	8.44	17718.77f
17009.68f	3.87	7.60	17375.69e	3.76	7.82	17719.66f
17009.77f	3.96	7.82	17376.72f	0.72	8.19	17719.76f
17021.77f	3.76	8.04	17377.70f	1.70	8.39	17725.71f
17032.64f	2.43	8.34	17384.72f	0.59	8.14	17730.52f
17032.77f	2.56	8.44	17402.63f	2.23	8.34	17730.74f

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	BF Oph			J. D. and Telescope			BF Oph			J. D. and Telescope		
	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.
17758.68f	0.29	7.82	18069.86f	2.30	8.39	18395.83f	2.83	8.49				
17759.62f	1.23	8.14	18081.67f	1.91	8.34	18396.85f	3.85	7.71				
17762.63e	0.17	7.82	18097.77f	1.74	8.39	18414.85f	1.46	8.34				
17772.65f	2.06	8.29	18100.68f	0.58	7.93	18421.81e	0.34	7.82				
17774.72f	0.06	7.60	18100.72f	0.62	8.09	18422.75f	1.28	8.24				
17784.62e	1.82	8.29	18103.70e	3.60	8.24	18423.81e	2.34	8.49				
17787.64f	0.78	8.11	18111.78f	3.54	8.19	18435.77f	2.09	8.44				
17793.63f	2.70	8.44	18115.58f	3.27	8.44	18438.68e	0.93	8.09				
17802.55f	3.48	8.34	18123.68e	3.24	8.39	18438.80e	1.05	8.19				
17803.55e	0.41	8.04	18126.52f	2.01	8.34	18438.84f	1.09	8.24				
17813.55f	2.28	8.44	18145.61f	0.76	7.82	18440.69f	2.94	8.44				
17814.52f	3.25	8.34	18148.56f	3.74	7.82	18453.80f	3.85	7.93				
17820.55f	1.14	8.29	18148.66f	3.81	7.71	18454.78f	0.76	8.09				
18015.82f	1.15	8.19	18150.57f	1.65	8.29	18456.71f	2.69	8.54				
18026.80f	3.99	7.82	18156.61f	3.62	8.24	18466.70e	0.48	7.82				
18027.89f	1.01	8.29	18157.56f	0.51	8.09	18467.67f	1.45	8.24				
18033.85f	2.90	8.44	18168.56f	3.37	8.34	*	18467.71f	1.49	8.29			
18034.82e	3.87	7.82	18174.57f	1.24	8.29	18471.75f	1.46	8.29				
18040.81f	1.73	8.29	18183.57f	2.11	8.39	18472.69f	2.40	8.44				
18042.86f	3.78	7.82	18199.56f	1.83	8.34	18474.70e	0.34	7.71				
18056.75f	1.40	8.34	18209.53f	3.66	8.19	18477.70f	3.34	8.29				
18063.79e	0.30	7.60	18361.84f	1.39	8.29	18479.65f	1.22	8.19				
18068.82f	1.26	8.29	18392.79f	3.86	7.82	18481.68f	3.25	8.44				
18069.81f	2.25	8.39	18394.81f	1.81	8.54	18495.69f	0.99	8.14				

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TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

## TWENTY-FIVE SOUTHERN CEPHEID VARIABLE STARS

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J. D. and Telescope	SECTION C			J. D. and Telescope			BF Oph		
	Phase	BF Oph Mag.	Phase	Phase	BF Oph Mag.	Phase	Phase	BF Oph Mag.	
18498.61f	3.91	7.93		18820.82f	0.68	7.87	18912.53f	2.89	8.39
18499.71f	0.94	8.14	18821.79f	1.65	8.39	18917.51f	3.81	7.82	
18500.63f	1.86	8.29	18822.73f	2.59	8.39	18918.52f	0.75	8.09	
18500.72f	1.95	8.39	18827.70f	3.49	8.39	18919.55f	1.78	8.39	
18501.59f	2.82	8.49	18827.76f	3.55	8.24	19137.85f	0.41	7.71	
18503.61f	0.78	8.14	18830.73e	2.45	8.54	19153.79f	0.07	7.60	
18506.68f	3.85	8.04	18831.68f	3.40	8.34	19159.81f	2.03	8.29	
18507.60e	0.70	7.93	18832.78f	0.44	7.93	19184.73e	2.54	8.44	
18509.61f	2.71	8.39	18848.63f	0.01	7.71	19191.67e	1.34	8.29	
18510.60f	3.70	8.09	18849.70f	1.08	8.29	19204.62f	2.09	8.39	
18514.67f	3.60	8.19	18852.70e	0.02	7.60	19204.65f	2.12	8.39	
18514.62f	3.65	8.14	18855.66f	2.98	8.44	19204.74f	2.21	8.34	
18524.52f	1.35	8.19	18855.75f	3.07	8.46	19205.65f	3.12	8.44	
18531.56f	0.25	7.82	18858.62f	1.87	8.29	19213.63f	2.96	8.54	
18531.61f	0.30	7.71	18859.60e	2.85	8.44	19219.64e	0.84	7.93	
18535.56f	0.18	7.82	18859.65f	2.90	8.44	19231.52f	0.51	8.09	
18565.53f	1.68	8.39	18859.70f	2.95	8.49	19232.53f	1.52	8.34	
18752.85e	1.87	8.34	18862.61f	1.79	8.34	19233.62f	2.61	8.44	
18766.88f	3.69	8.09	18862.66f	1.84	8.24	19233.66f	2.65	8.49	
18774.85e	3.53	8.39	18866.59f	1.70	8.29	19235.61f	0.53	7.82	
18797.79f	2.06	8.29	18878.64f	1.55	8.29	19237.63f	2.55	8.39	
18811.78e	3.84	7.71	18884.63f	3.47	8.39	19240.60f	1.46	8.19	
18819.72f	3.65	8.14	18887.59f	2.36	8.39	19241.61f	2.47	8.44	
18820.77f	0.63	7.93	18908.54f	2.97	8.59	19250.56f	3.28	8.29	

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION C									
J. D. and Telescope	BF Oph Phase	Mag.	J. D. and Telescope	Phase	Mag.	BF Oph Phase	Mag.	J. D. and Telescope	Phase
19264.60f	1.05	8.24	19545.81f	1.56	8.39	19632.53f	2.86	8.44	
19267.56f	4.01	7.82	19557.74e	1.29	8.19	19632.55f	2.91	8.46	
19271.55e	3.93	7.65	19560.67f	0.15	7.76	19634.56f	0.82	8.09	
19288.50f	0.54	7.71	19561.72f	1.20	8.14	19643.49f	1.61	8.44	
19291.51f	3.55	8.19	19561.77f	1.25	8.19	19644.56f	2.68	8.39	
19300.50f	0.34	7.71	19562.69f	2.17	8.39	19645.56f	3.68	8.19	
19302.51f	2.35	8.34	19566.61f	2.02	8.39	19645.63f	3.75	8.14	
19304.49f	0.26	7.82	19568.66f	0.01	7.60	19648.53f	2.58	8.44	
19311.53f	3.23	8.44	19568.70f	0.05	7.71	19650.57f	0.56	8.09	
19487.88e	0.59	7.71	19572.70f	4.05	7.76	19650.65f	0.64	7.71	
19510.76f	3.13	8.49	19589.69f	0.70	8.04	19657.56f	3.48	8.34	
19511.78f	0.08	7.82	19592.64f	3.65	7.93	19688.52f	1.89	8.24	
19513.83e	2.13	8.44	19593.66f	0.60	8.04	19865.87e	0.25	7.82	
19517.78f	2.01	8.44	19593.71f	0.65	7.71	19889.83f	3.87	7.71	
19518.78f	3.01	8.44	19599.64f	2.51	8.44	19889.88f	3.92	7.82	
19520.83e	0.99	7.93	19601.60f	0.40	7.87	19895.81f	1.72	8.39	
19532.72f	0.68	7.93	19601.64f	0.44	7.87	19898.82f	0.66	7.93	
19534.69f	2.65	8.54	19603.61f	2.41	8.49	19898.87f	0.71	7.82	
19534.77f	2.73	8.44	19603.65f	2.45	8.44	19911.80f	1.43	8.19	
19541.79f	1.61	8.24	19604.55f	3.35	8.39	19911.85f	1.48	8.44	
19542.85f	2.67	8.44	19615.58f	2.18	8.39	19912.76f	2.39	8.34	
19544.71f	0.46	7.82	19616.53f	3.13	8.49	19912.80f	2.43	8.44	
19544.77f	0.52	7.93	19616.58f	3.18	8.59	19917.73e	3.30	8.39	
19545.76f	1.51	8.24	19620.57f	3.10	8.39	19921.75e	3.25	8.44	

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION C			J. D. and Telescope			BF Oph Phase			BF Oph Phase		
	BF Oph Phase	Mag.	J. D. and Telescope	BF Oph Phase	Mag.	J. D. and Telescope	BF Oph Phase	Mag.	J. D. and Telescope	BF Oph Phase	Mag.	
19921.77f	3.27	8.54	19982.54f	3.02	8.54	20307.67f	2.71	8.39				
19922.82f	0.25	7.87	19985.52f	1.93	8.49	20308.66f	3.70	8.09				
19925.69f	3.12	8.54	19989.52f	1.86	8.44	20309.65e	0.62	7.71				
19926.72f	0.08	7.71	19998.57f	2.78	8.54	20314.70f	1.60	8.34				
19930.60f	3.96	7.71	20012.57f	0.50	7.87	20327.59f	2.29	8.39				
19930.69f	4.05	7.71	20013.56f	1.49	8.29	20327.64f	2.34	8.44				
19931.66f	0.95	8.09	20020.52f	0.32	7.82	20328.60f	3.30	8.39				
19942.66f	3.82	7.82	20027.51f	3.24	8.39	20329.69f	0.32	7.82				
19942.76f	3.92	7.71	20029.51f	1.17	8.09	20330.60f	1.23	8.19				
19943.75f	0.84	8.09	20037.52f	1.05	8.09	20330.67f	1.30	8.44				
19944.67f	1.76	8.39	20044.52f	3.98	7.82	20332.63e	3.26	8.44				
19947.66e	0.68	7.93	20044.56f	4.02	7.82	20337.66f	0.15	7.71				
19947.72f	0.74	7.87	20276.76e	0.28	7.82	20338.58f	1.07	8.19				
19950.71f	3.73	7.82	20280.76e	0.20	7.71	20338.62f	1.11	8.19				
19951.68f	0.63	8.04	20287.59f	2.97	8.44	20354.58f	0.80	7.93				
19951.72f	0.67	8.04	20287.64f	3.02	8.39	20357.54f	3.76	7.82				
19953.63f	2.58	8.49	20296.67f	3.91	7.82	20357.60f	3.82	7.65				
19959.58f	0.40	7.60	20297.67f	0.84	8.09	20365.54f	3.62	7.82				
19961.60f	2.42	8.34	20301.67e	0.77	7.93	20365.60f	3.68	7.93				
19971.61f	0.22	7.82	20303.68f	2.78	8.44	20366.58f	0.60	7.93				
19973.51f	2.12	8.44	20303.73f	2.83	8.49	20367.59f	1.61	8.44				
19976.57f	1.12	8.09	20306.65f	1.69	8.24	20369.55f	3.57	8.14				
19976.61f	1.16	8.14	20306.74f	1.74	8.34	20370.55f	0.50	8.09				
19977.67f	2.22	8.47	20307.56f	2.60	8.46	20372.62f	2.57	8.44				

## TWENTY-FIVE SOUTHERN CEPHEID VARIABLE STARS

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION C						SECTION C					
J. D. and Telescope	BF Oph Phase	Mag.	J. D. and Telescope	BF Oph Phase	Mag.	J. D. and Telescope	BF Oph Phase	Mag.	J. D. and Telescope	BF Oph Phase	Mag.
20384.53f	2.27	8.49	20656.63f	1.82	8.49	20712.53f	0.77	7.93			
20386.52f	0.20	7.71	20657.69e	2.88	8.54	20719.61f	3.78	7.82			
20388.55f	2.23	8.44	20659.72f	0.84	7.87	20720.59f	0.69	8.09			
20391.54f	1.15	8.34	20660.73f	1.85	8.39	20747.52f	3.21	8.54			
20393.53f	3.14	8.44	20667.77f	0.75	8.04	20750.81f	2.43	8.34			
20394.58f	0.12	7.71	20668.72f	1.70	8.29	20752.48f	0.04	7.71			
20414.54f	3.81	7.82	20669.64f	2.62	8.44	20769.48f	0.76	7.93			
20415.54f	0.74	7.82	20670.62f	3.60	7.98	20776.49f	3.70	7.93			
20568.89e	3.57	8.14	20670.66f	3.64	7.93	20964.84e	0.86	8.19			
20580.87f	3.35	8.29	20681.65f	2.43	8.44	20991.77f	3.38	8.19			
20600.85e	2.99	8.34	20681.71f	2.49	8.49	20992.72f	0.26	7.82			
20605.86f	3.93	7.82	20683.67f	0.38	7.93	20993.73e	1.27	8.14			
20610.81f	0.75	8.09	20685.63e	2.34	8.39	20994.75f	2.29	8.34			
20610.85f	0.79	8.19	20688.66f	1.30	8.29	20994.80f	2.34	8.34			
20624.73e	2.46	8.54	20688.71f	1.35	8.44	21006.79f	2.13	8.52			
20624.80f	2.53	8.44	20690.60f	3.24	8.34	21007.71f	3.05	8.39			
20627.72e	1.38	8.29	20691.58f	0.16	7.82	21007.78f	3.12	8.49			
20628.79f	2.45	8.44	20691.62f	0.20	7.71	21009.78f	1.05	8.24			
20650.76e	0.02	7.82	20693.61f	2.19	8.44	21009.83f	1.10	8.09			
20652.69f	1.95	8.34	20695.62f	0.13	7.82	21011.69f	2.96	8.44			
20652.77f	2.03	8.44	20695.66f	0.17	7.82	21011.76f	3.03	8.49			
20653.76f	3.02	8.44	20695.68f	0.19	7.71	21012.65f	3.92	7.82			
20654.78f	4.04	7.82	20708.55f	0.85	8.09	21012.67f	3.94	7.82			
20655.66f	0.85	7.93	20710.53f	2.83	8.54	21013.67f	0.87	8.09			

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TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

## TWENTY-FIVE SOUTHERN CEPHEID VARIABLE STARS

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SECTION C						BF Oph					
J. D. and Telescope	BF Oph Phase										
21013.71f	0.91	8.29	21079.50f	1.70	8.39	21365.70f	3.05	8.49			
21021.67f	0.74	8.09	21080.60f	2.71	8.44	21370.75f	4.04	7.87			
21022.72f	1.79	8.54	21091.55e	1.46	8.34	21372.74f	1.96	8.44			
21023.70f	2.77	8.39	21092.54f	2.45	8.54	21391.70f	0.58	7.82			
21023.74f	2.81	8.49	21093.54f	3.45	8.24	21393.65f	2.53	8.39			
21025.69f	0.69	7.93	21099.55f	1.32	8.29	21393.75f	2.63	8.44			
21026.63f	1.63	8.24	21103.55f	1.25	8.19	21394.68f	3.56	8.29			
21035.63e	2.49	8.49	21127.51f	0.81	8.14	21395.62f	0.43	7.82			
21035.64f	2.50	8.44	21134.49f	3.72	7.93	21397.70e	2.51	8.44			
21044.55f	3.28	8.39	21135.52f	0.68	8.09	21398.62f	3.43	8.24			
21044.67e	3.40	8.44	21137.53f	2.69	8.49	21398.66f	3.47	8.34			
21045.58f	0.24	7.82	21153.48f	2.37	8.29	21398.70f	3.51	8.19			
21047.63f	2.29	8.54	21155.49f	0.31	8.04	21399.61f	0.35	8.09			
21048.60f	3.26	8.39	21156.51f	1.33	8.24	21400.67f	1.41	8.29			
21048.68f	3.34	8.44	21160.50f	1.25	8.19	21403.67f	0.34	7.82			
21049.63f	0.22	8.09	21313.86e	0.03	7.82	21407.68e	0.29	7.82			
21050.59f	1.18	8.19	21316.84f	3.01	8.54	21421.58f	1.98	8.44			
21062.59f	0.98	8.24	21333.84f	3.74	7.71	21424.63f	0.96	8.14			
21062.63f	1.02	8.34	21335.84f	1.67	8.14	21425.68f	2.01	8.39			
21063.63f	2.02	8.44	21337.83f	3.66	7.98	21426.54f	2.87	8.59			
21066.59f	0.91	8.29	21360.72e	2.14	8.54	21426.59f	2.92	8.44			
21066.63f	0.95	8.24	21361.76f	3.18	8.54	21427.54f	3.87	7.82			
21077.55f	3.73	7.93	21363.75f	1.10	8.09	21427.62f	3.95	7.82			
21079.54f	1.65	8.39	21364.83f	2.18	8.49	21428.65f	0.92	7.93			

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION C						SECTION C					
J. D. and Telescope	BF Oph Phase	Mag.	J. D. and Telescope	BF Oph Phase	Mag.	J. D. and Telescope	BF Oph Phase	Mag.	J. D. and Telescope	BF Oph Phase	Mag.
21429.66f	1.93	8.34	21806.58f	0.52	7.82	22551.54f	1.03	8.04			
21450.55f	2.48	8.49	21806.66f	0.60	8.09	22552.50f	1.99	8.44			
21451.53f	3.46	8.34	21844.52f	1.85	8.24	22574.51f	3.66	7.93			
21452.52f	0.38	7.71	21866.49f	3.48	8.19	22580.51f	1.53	8.34			
21457.56f	1.35	8.14	22070.78e	0.30	8.04	22581.51f	2.53	8.59			
21516.50f	3.34	8.39	22071.83e	1.35	8.29	22767.85e	1.74	8.39			
21663.90e	0.22	7.60	22097.67e	2.78	8.39	22821.75e	2.76	8.59			
21715.82e	3.32	8.29	22131.61f	0.11	7.60	22843.73e	0.33	7.71			
21716.75f	0.19	7.71	22132.62f	1.12	8.19	22854.71f	3.17	8.39			
21731.72f	2.95	8.44	22135.64f	0.07	7.82	22868.65f	0.84	8.24			
21748.63e	3.59	7.93	22136.59f	1.02	8.09	22905.59f	1.17	8.24			
21749.71f	0.60	8.09	22138.60f	3.03	8.44	23122.87q	2.84	8.54			
21751.70f	2.59	8.59	22138.67e	3.10	8.44	23143.88q	3.51	7.93			
21755.70f	2.52	8.44	22142.55f	2.91	59	23166.79q	2.01	8.39			
21757.71f	0.47	7.93	22165.54f	1.50	14	23169.83q	0.99	7.93			
21760.64f	3.40	8.34	22166.51f	2.47	8.39	23172.79e	3.95	7.60			
21760.69f	3.45	7.93	22171.53f	3.42	8.09	23172.84f	4.00	7.60			
21777.60f	0.02	7.82	22187.54f	3.15	8.29	23175.77q	2.86	8.54			
21783.59f	1.94	8.49	22192.31f	3.86	7.71	23175.84e	2.93	8.39			
21786.60f	0.88	8.19	22225.53f	0.46	7.93	23176.68f	3.77	7.60			
21788.63f	2.91	8.39	22458.76f	1.82	8.54	23180.86f	3.88	7.82			
21789.59f	3.87	7.71	22516.60f	2.71	8.44	23181.82f	0.77	8.19			
21804.58f	2.59	8.34	22517.55f	3.66	7.82	23190.76q	1.58	8.39			
21805.53f	3.54	8.14	22541.57f	3.27	8.49	23194.75f	1.50	8.19			

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION C						
J. D. and Telescope	BF Oph Phase	Mag.	J. D. and Telescope	BF Oph Phase	Mag.	J. D. and Telescope
23194.82q	1.57	8.39	23306.51f	3.42	8.34	23645.61q
23197.76q	0.43	7.93	23311.52f	0.30	7.82	23662.53f
23198.73f	1.41	8.09	23311.52q	0.30	7.93	23664.51f
23198.77f	1.45	8.29	23346.52f	2.75	8.54	23664.56f
23203.72q	2.33	8.44	23474.90e	0.96	8.9	23901.87z
23204.72e	3.33	8.19	23498.77q	0.42	7.3	23905.83z
23205.65f	0.19	7.82	23535.65f	0.69	7.82	23912.79z
23206.69f	1.23	8.14	23535.69f	0.73	7.93	23919.73z
23209.72f	0.20	7.82	23535.78f	0.82	7.93	23919.79z
23222.72f	0.99	8.09	23546.78e	3.68	7.82	23934.68z
23225.70f	3.97	7.71	23561.73f	2.36	8.39	23937.70q
23228.66q	2.86	8.39	23563.77q	0.33	7.93	23947.68z
23230.64q	0.78	7.93	23573.69f	2.11	8.39	23947.76q
23235.62f	1.69	8.14	23576.78f	1.13	8.24	23960.58z
23237.59f	3.66	7.82	23581.68q	1.97	8.39	23965.63z
23239.67f	1.67	8.49	23587.59z	3.81	7.71	23965.71z
23247.66f	1.52	8.24	23587.67q	3.89	7.93	23967.56z
23257.60q	3.33	8.19	23588.67e	0.82	8.14	23969.70z
23258.59f	0.25	7.71	23601.63e	1.58	8.39	23969.88z
23261.53f	3.22	8.34	23614.62e	2.36	8.54	23974.68q
23262.62f	0.21	7.82	23615.56f	3.30	8.34	23985.59e
23276.60f	1.99	8.49	23616.51f	0.18	7.71	23993.64z
23277.57f	2.96	8.49	23639.51f	2.84	8.34	24018.49z
23283.72f	0.97	8.09	23641.60f	0.87	7.93	24023.58z

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

## SECTION C

J. D. and Telescope	BF Oph Phase	J. D. and Telescope	BF Oph Phase	J. D. and Telescope	BF Oph Phase
24026.52z	3.39	8.19	24348.62z	0.05	7.71
24033.52z	2.26	8.34	24373.56z	0.58	8.14
24033.57z	2.31	8.34	24399.53z	2.15	8.24
24044.52z	1.05	8.19	24404.52z	3.07	8.34
24232.86q	2.27	8.49	24432.53z	2.60	8.39
24241.84e	3.11	8.54	24623.78z	2.66	8.34
24243.85z	1.05	8.19	24640.79e	3.39	8.19
24256.80q	1.80	8.19	24641.77z	0.31	7.71
24256.82e	1.82	8.34	24646.77z	1.24	8.24
24275.74q	0.40	8.14	24656.72e	3.05	8.47
24285.69z	2.21	8.29	24656.75q	3.08	8.49
24285.79z	2.31	8.44	24676.66q	2.65	8.54
24289.79z	2.24	8.39	24678.74q	0.66	7.93
24292.76z	1.14	8.19	24679.61z	1.53	8.34
24298.68z	3.00	8.39	24682.67z	0.53	8.14
24300.80z	1.05	8.09	24683.67q	1.53	8.19
24301.77q	2.02	8.54	24695.59e	1.24	8.29
24314.64z	2.68	8.29	24697.67e	3.32	8.24
24314.74q	2.78	8.44	24731.57z	0.61	8.19
24314.74e	2.78	8.49	24731.64z	0.68	7.71
24315.70e	3.74	7.82	24734.55z	3.59	7.93
24317.65z	1.63	8.34	24738.57z	3.54	8.04
24318.65q	2.63	8.29	24753.52z	2.22	8.54
24326.63z	2.47	8.44	24770.53q	2.96	8.44
SHAPLEY					
					25739.77e

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. J. D. and		BF Oph		J. D. and		BF Oph		S Ara		J. D. and		BF Oph	
Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.
0.77	8.09	25790	64e	2.00	8.39	25826	60e	1.34	8.04	0.60	7.82	224	11.07
0.48	7.82	25792	66r	4.02	7.71	25829	58r	0.26	7.82	0.80	10.79	16636	521f
1.44	8.34	25765	68e									15941	690f
J. J. D. and		S Ara		J. D. and		S Ara		J. D. and		S Ara		J. D. and	
Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.
0.002	10.34	15941	690f	0.300	11.05	16653	614f	0.051	10.68				
.423	10.01	15943	562f	.364	11.05	16667	610f	.038	10.34				
.214	11.15	15945	711f	.254	11.09	16685	619f	.424	10.01				
.351	11.02	16008	577f	.307	10.98	16697	566f	.170	11.02				
.110	10.79	16183	866f	.265	11.09	16706	601f	.167	10.79				
.354	11.09	16254	777f	.229	11.15	16726	596f	.279	11.02				
.169	11.11	16297	647f	.170	11.05	16745	538f	.242	11.15				
.287	11.11	16302	659f	.211	11.05	16915	890f	.232	11.05				
.311	11.05	16310	727f	.146	10.79	16957	797f	.114	10.68				
.382	10.58	16311	558f	.103	10.79	16960	760f	.366	11.02				
.368	10.85	16359	562f	.177	10.85	16968	749f	.221	11.05				
.232	11.09	16379	550f	.282	11.09	16981	830f	.197	11.09				
.191	11.09	16593	749f	.286	11.09	17000	771f	.165	10.96				
.060	10.34	16604	743f	.435	9.95	17032	815f	.119	10.96				
.224	11.07	16607	801f	.330	11.02	17039	564f	.089	10.74				
.080	10.79	16636	725f	.334	11.09	17094	587f	.434	10.01				
.004	10.68	16650	672f	.272	11.09	17297	844f	.076	11.15				

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION C						J. D. and Telescope	S Ara					
	S Ara	Phase	Mag.	J. D. and Telescope	Phase	Mag.		S Ara	Phase	Mag.	J. D. and Telescope	Phase	Mag.
17335.760f	0.342	11.09	18434.777f	0.327	11.09	19290.544f	0.218	10.96					
17352.829f	.197	10.96	18444.768f	.376	11.02	19301.501f	.330	11.09					
17376.803f	.221	11.02	18451.703f	.081	10.68	19312.521f	.053	10.24					
17401.717f	.281	11.09	18467.757f	.319	11.02	19323.520f	.207	11.09					
17430.654f	.297	11.05	18481.634f	.187	11.02	19340.846f	.325	11.05					
17464.556f	.308	11.05	18494.735f	.184	11.02	19348.803f	.449	9.95					
17499.522f	.026	10.06	18498.694f	.076	10.68	19360.720f	.165	10.79					
17704.721f	.068	10.58	18538.506f	.121	10.74	19369.777f	.185	10.85					
17738.792f	.248	11.09	18791.805f	.363	11.07	19375.687f	.220	10.98					
17758.765f	.338	11.09	18832.672f	.108	10.63	19395.706f	.356	10.96					
17772.744f	.309	11.05	18860.714f	.133	10.85	19399.691f	.274	11.02					
17803.607f	.443	10.01	18917.579f	.060	10.46	19334.604f	.392	10.85					
18026.882f	.034	10.17	19177.809f	.004	10.01	19648.568f	.347	11.02					
18041.859f	.098	10.74	19180.801f	.284	11.00	19902.841f	.207	11.02					
18070.788f	.107	10.79	19196.773f	.440	10.19	19903.732f	.194	11.04					
18082.861f	.431	10.06	19203.760f	.197	11.09	19917.791f	.245	10.96					
18109.690f	.146	10.96	19213.714f	.209	11.04	19930.648f	.449	10.06					
18145.565f	.322	11.11	19220.751f	.016	10.17	19942.853f	.001	10.01					
18150.656f	.442	10.17	19224.691f	.341	11.07	19945.750f	.187	10.96					
18159.521f	.270	11.05	19234.630f	.339	11.15	19943.644f	.302	10.85					
18187.565f	.297	11.07	19235.570f	.375	11.15	19971.677f	.356	11.05					
18190.548f	.116	10.79	19239.637f	.375	11.09	19987.526f	.389	11.15					
18361.891f	.195	10.96	19250.647f	.088	10.58	20012.525f	.082	10.52					
18422.815f	.114	10.74	19254.630f	.004	10.01	20047.615f	.377	10.79					

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION C			S Ara			J. D. and Telescope			S Ara		
	S Ara Phase	S Ara Mag.	J. D. and Telescope	S Ara Phase	S Ara Mag.	J. D. and Telescope	S Ara Phase	S Ara Mag.	J. D. and Telescope	S Ara Phase	S Ara Mag.	
20282.800f	0.128	10.74	20669.690f	0.202	11.11	21078.543f	0.096	10.58				
20287.727f	.084	10.52	20681.742f	.053	10.34	21080.548f	.293	11.11				
20295.809f	.032	10.06	20690.693f	.418	10.24	21081.543f	.385	11.15				
20313.744f	.344	11.15	20693.658f	.220	10.96	21126.513f	.165	10.96				
20325.730f	.129	10.79	20695.689f	.443	9.95	21169.493f	.215	11.05				
20336.675f	.228	11.05	20696.661f	.059	10.36	21309.858f	.043	10.27				
20337.706f	.356	11.15	20708.671f	.320	11.15	21332.835f	.426	10.01				
20343.667f	.442	10.06	20709.626f	.372	11.13	21374.710f	.275	11.09				
20348.676f	.028	10.17	20719.558f	.362	11.11	21397.662f	.181	11.15				
20350.619f	.164	11.11	20749.517f	.045	10.22	21425.624f	.126	10.85				
20352.595f	.332	11.05	20756.503f	.252	11.15	21428.612f	.403	10.31				
20353.652f	.034	10.52	20777.491f	.002	10.06	21438.562f	.411	10.17				
20355.609f	.183	11.07	20938.892f	.078	10.68	21449.532f	.084	10.58				
20372.550f	.404	10.74	20994.837f	.441	9.95	21453.498f	.436	10.01				
20386.571f	.417	10.22	21007.831f	.330	11.04	21756.681f	.401	10.79				
20392.587f	.106	10.68	21009.791f	.039	10.24	21757.668f	.032	10.24				
20429.549f	.013	10.06	21010.764f	.100	10.68	21790.624f	.000	10.01				
20441.551f	.266	10.01	21011.741f	.173	10.41	21804.620f	.440	10.01				
20494.869f	.394	11.02	21017.643f	.201	11.07	22129.600f	.059	10.31				
20607.769f	.189	11.05	21021.714f	.205	11.09	22138.551f	.424	10.06				
20612.836f	.286	11.15	21022.675f	.262	11.07	22161.647f	.022	10.24				
20654.735f	.159	11.07	21047.719f	.000	9.90	22175.559f	.377	11.07				
20662.726f	.016	10.06	21051.663f	.329	11.05	22488.631f	.290	11.02				
20667.712f	.031	10.24	21065.624f	.282	11.15	22516.680f	.322	11.09				

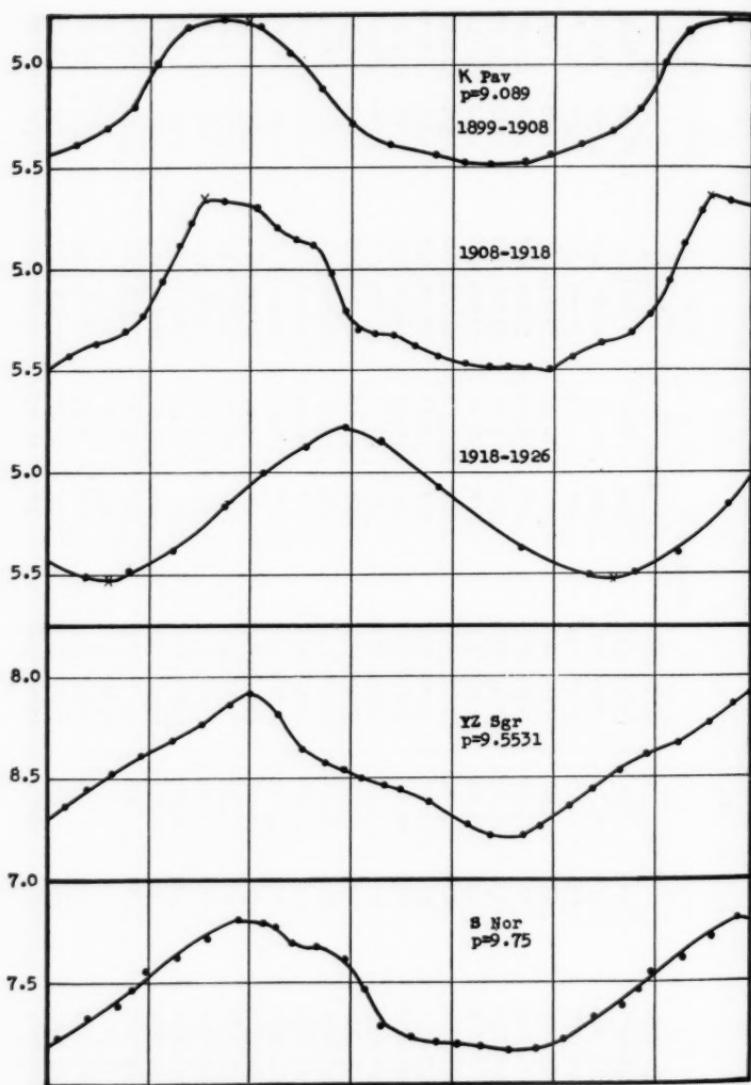


TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION C								SECTION C									
J. D. and Telescope	S Ara	Phase	Mag.	J. D. and Telescope	S Ara	Phase	Mag.	J. D. and Telescope	S Ara	Phase	Mag.	J. D. and Telescope	S Ara	Phase	Mag.		
22525.630f	0.234	11.07	22307.518f	0.354	11.05	24326.691z	0.063	10.79	22542.548f	0.432	10.01	23533.861f	.300	11.15	24356.582z	.129	10.96
22543.555f	.084	10.68	23576.711f	.226	11.15	24371.635z	.270	11.07	22577.520f	.157	10.85	23647.560f	.123	10.85	24411.522z	.391	10.52
22584.512f	.371	11.09	23648.551f	.210	10.58	24433.512z	.238	11.09	23172.861f	.359	11.09	23673.530f	.336	11.11	24626.522z	.291	11.02
23191.710f	.229	11.07	23692.532f	.358	11.09	24648.701z	.327	11.09	23194.791f	.147	10.85	23902.865z	.110	10.85	24670.700z	.184	10.85
23197.776f	.420	10.31	23918.780z	.209	11.02	24704.697z	.209	11.00	23219.670f	.172	10.85	24273.870z	.114	10.79	24716.776z	.167	11.04
23222.681f	.020	10.29	24296.758z	.407	10.41	24798.505z	.104	10.79	23236.691f	.021	10.34	24318.702z	.209	11.09	25382.539z	.296	11.00
23237.677f	.103	10.68															
J. D. and Telescope	*	κ Pav	Mag.	J. D. and Telescope	*	κ Pav	Mag.	J. D. and Telescope	*	κ Pav	Mag.	J. D. and Telescope	*	κ Pav	Mag.		
14863.64f	6.49	5.20	15189.67f	5.35	5.49	15560.71f	3.79	5.44	14871.63f	5.39	5.44	15561.63f	4.71	5.67			
14871.68f	5.44	5.44	15221.68f	1.01	5.03	15560.66f	6.51	5.38	14871.68f	5.38	5.15	15560.66f	6.51	5.38			
14874.64f	8.40	4.79	15274.58f	8.47	4.47	15602.65f	0.29	4.87	14925.52f	4.76	5.32	15607.61f	5.25	5.44			
14927.57f	6.81	5.20	15481.81f	6.68	5.32	15633.57f	3.94	5.49	15116.88f	5.27	5.61	15646.54f	7.86	4.71			
15148.68f	0.72	4.87	15533.65f	4.03	5.44	15659.52f	2.63	5.38	15541.79f	3.04	5.52						

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	κ Pav	Phase	Mag.	SECTION C			J. D. and Telescope	κ Pav	Phase	Mag.
				J. D. and Telescope	κ Pav	Phase				
15842.88f	4.23	5.49	16287.65f	3.65	5.32	16706.60f	4.59	5.44		
15868.82f	2.90	5.44	16302.66f	0.52	4.79	16713.68f	2.58	5.32		
15872.89f	6.97	5.26	16310.73f	8.59	4.71	16726.60f	6.41	5.32		
15887.68f	3.59	5.44	16311.59f	0.36	4.79	16745.64f	7.18	4.95		
15898.68f	5.51	5.49	16338.65f	0.16	4.79	16760.56f	4.02	5.44		
15906.79f	4.52	5.49	16345.66f	7.17	5.20	16915.89f	4.85	5.44		
15911.77f	0.41	4.87	16358.62f	1.95	5.32	16932.88f	3.67	5.38		
15927.72f	7.28	5.20	16379.55f	4.71	5.52	16937.88f	8.67	4.71		
15931.54f	2.01	5.32	16398.56f	5.54	5.32	16957.80f	1.32	5.20		
15934.69f	5.16	5.44	16582.86f	8.08	4.87	16960.76f	4.32	5.44		
15940.55f	1.93	5.32	16593.75f	0.79	5.20	16968.75f	3.19	5.44		
15941.69f	3.07	5.26	16594.81f	1.85	5.44	16975.77f	1.12	5.32		
15945.71f	7.09	5.15	16604.74f	2.70	5.44	16981.83f	7.18	5.15		
15973.59f	7.71	4.79	16605.84f	3.80	5.44	16999.77f	6.94	5.26		
16008.58f	6.34	5.26	16607.80f	5.76	5.32	17000.78f	7.95	4.79		
16045.53f	6.94	5.44	16625.73f	5.51	5.49	17002.71f	0.79	4.79		
16183.87f	8.96	4.63	16634.80f	5.49	5.44	17006.76f	4.84	5.49		
16221.86f	-	1.51	16641.72f	3.32	5.49	17032.82f	3.64	5.49		
16229.86f	0.42	4.79	16653.61f	6.13	5.49	17038.53f	0.26	5.03		
16254.78f	7.17	5.20	16662.73f	6.16	5.44	17039.56f	1.29	5.20		
16269.73f	3.94	5.44	16667.61f	1.95	5.44	17069.62f	4.09	5.61		
16278.72f	3.84	5.44	16680.53f	5.78	5.32	17094.69f	1.79	5.32		
16282.77f	7.89	4.87	16685.62f	1.78	5.20	17097.58f	4.78	5.44		
16285.67f	1.71	5.15	16697.57f	4.65	5.44	17125.54f	5.48	5.38		

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TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION C					
J. D. and Telescope	$\kappa$ Pav Phase	$\kappa$ Pav Mag.	J. D. and Telescope	$\kappa$ Pav Phase	J. D. and Telescope
17297.84f	5.11	5.44	17760.69f	4.47	5.44
17335.76f	6.68	5.32	17772.74f	7.43	5.03
17341.78f	3.61	5.49	17792.63f	0.06	4.95
17352.83f	5.57	5.38	17803.61f	1.95	5.38
17376.80f	2.28	5.20	17835.54f	6.62	5.44
17377.75f	3.23	5.44	17836.53f	7.61	4.87
17384.68f	1.07	5.03	18026.88f	7.11	5.26
17390.69f	7.08	4.95	18033.89f	5.03	5.44
17401.72f	9.02	4.63	18041.86f	3.91	5.61
17402.72f	0.93	5.20	18070.79f	5.58	5.49
17430.65f	1.60	5.32	18081.77f	7.47	4.79
17431.61f	2.56	5.44	18082.86f	8.56	4.87
17436.61f	7.56	4.79	18102.78f	1.22	4.95
17464.56f	8.24	4.87	18109.69f	8.13	4.87
17489.53f	5.95	5.44	18118.62f	7.97	4.79
17499.52f	6.85	5.20	18129.58f	0.75	4.87
17505.51f	3.75	5.49	18132.71f	3.88	5.49
17690.81f	7.29	5.26	18145.57f	7.65	4.87
17704.72f	3.03	5.38	18150.66f	3.66	5.52
17718.73f	7.95	4.71	18154.65f	7.65	4.79
17730.70f	1.74	5.44	18159.52f	3.44	5.49
17735.70f	6.74	5.26	18172.60f	7.42	4.87
17738.79f	0.75	5.20	18187.57f	4.21	5.61
17758.77f	2.55	5.44	18190.55f	7.19	5.20

$\kappa$ Pav Phase	$\kappa$ Pav Mag.	$\kappa$ Pav Phase	$\kappa$ Pav Mag.
18191.54f	8.18	4.79	
18361.89f	5.86	5.44	
18362.88f	6.85	5.20	
18420.82f	1.18	5.09	
18422.82f	3.18	5.44	
18434.78f	6.05	5.44	
18438.75f	0.93	4.87	
18444.77f	6.95	5.26	
18451.70f	4.79	5.52	
18456.80f	0.70	4.79	
18466.77f	1.69	5.15	
18467.76f	2.68	5.32	
18478.79f	4.62	5.52	
18479.75f	5.58	5.49	
18481.63f	7.46	5.15	
18494.74f	2.39	5.26	
18498.69f	6.34	5.44	
18502.58f	1.14	5.03	
18508.67f	7.23	5.32	
18528.63f	9.02	4.79	
18533.60f	4.80	5.44	
18538.51f	0.72	4.87	
18539.58f	1.79	5.26	
18540.62f	2.83	5.44	

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	κ Pav	Phase	Mag.	SECTION C			J. D. and Telescope			κ Pav		
				J. D. and Telescope	Phase	Mag.	J. D. and Telescope	Phase	Mag.	J. D. and Telescope	Phase	Mag.
18561.52f	5.56	5.44	19222.74f	3.35	5.44	19515.87f	5.67	5.32				
18602.51f	1.11	4.87	19224.69f	5.30	5.61	19516.86f	6.66	5.32				
18767.85f	2.86	5.44	19231.66f	3.18	5.44	19532.76f	4.38	5.38				
18778.84f	4.76	5.52	19234.63f	6.15	5.44	19548.80f	2.24	5.20				
18791.81f	8.65	4.79	19235.57f	7.09	5.26	19550.75f	4.19	5.32				
18804.85f	3.51	5.52	19239.64f	2.08	5.44	19560.72f	5.08	5.32				
18806.78f	5.44	5.67	19239.73f	2.17	5.44	19565.75f	1.02	5.20				
18828.68f	0.08	4.71	19250.65f	4.00	5.49	19567.71f	2.98	5.44				
18832.67f	4.07	5.44	19251.63f	4.98	5.44	19569.78f	5.05	5.44				
18852.62f	5.84	5.44	19252.51f	5.86	5.38	19575.69f	1.87	5.20				
18856.73f	0.86	4.87	19254.59f	7.94	4.79	19575.82f	2.00	5.32				
18860.65f	4.84	5.44	19254.63f	7.98	5.09	19589.86f	6.82	5.15				
18896.61f	4.39	5.44	19267.61f	2.78	5.38	19599.69f	7.69	4.79				
18917.58f	7.18	5.26	19290.54f	7.54	4.87	19601.73f	0.65	5.09				
18938.53f	0.87	4.87	19294.60f	2.51	5.44	19603.74f	2.66	5.32				
19136.87f	8.36	4.79	19300.63f	8.54	4.71	19617.71f	7.54	4.87				
19177.81f	3.86	5.49	19301.50f	0.32	4.79	19634.60f	6.25	5.26				
19180.89f	6.94	5.38	19305.60f	4.42	5.67	19634.65f	6.30	5.32				
19196.77f	4.65	5.44	19311.57f	1.30	4.79	19634.70f	6.35	5.38				
19203.76f	2.55	5.32	19312.52f	2.25	5.32	19648.57f	2.05	5.20				
19205.77f	4.56	5.52	19323.52f	4.16	5.49	19652.68f	6.16	5.44				
19213.71f	3.41	5.49	19329.55f	1.11	4.75	19653.51f	6.99	5.26				
19213.76f	3.46	5.44	19509.83f	8.71	4.47	19658.61f	3.00	5.44				
19220.75f	1.36		19510.85f	0.65	4.79	19663.58f	7.97	4.79				

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION C					
J. D. and Telescope	$\kappa_{\text{Pav}}$ Phase	$\kappa_{\text{Pav}}$ Mag.	J. D. and Telescope	$\kappa_{\text{Pav}}$ Phase	J. D. and Telescope
19693.52f	1.56	5.32	20287.73f	5.05	5.49
19693.55f	1.59	5.38	20287.77f	5.09	5.44
19891.86f	0.76	4.63	20295.81f	4.04	5.44
19902.84f	1.89	5.03	20308.80f	7.84	4.79
19917.79f	7.71	4.71	20313.74f	3.79	5.44
19925.78f	6.62	5.09	20314.73f	4.83	5.44
19929.66f	1.41	5.26	20334.75f	6.63	5.38
19930.65f	2.40	5.20	20336.68f	8.56	4.47
19942.85f	5.51	5.44	20337.71f	0.50	4.79
19945.75f	8.41	4.47	20343.67f	6.46	4.87
19952.64f	6.21	5.32	20350.62f	4.32	5.67
19954.66f	8.23	5.03	20352.60f	6.30	5.32
19971.68f	7.08	5.32	20353.65f	7.35	4.63
19971.80f	7.20	5.34	20353.69f	7.39	4.87
19974.63f	0.94	4.63	20355.61f	0.22	4.39
19974.77f	1.08	4.71	20358.67f	3.28	5.38
19985.61f	2.84	5.32	20362.55f	7.16	5.26
19987.53f	4.75	5.32	20362.67f	7.20	5.26
20012.53f	2.49	5.26	20372.55f	8.07	4.71
20013.60f	3.56	5.44	20386.57f	3.92	5.44
20043.62f	6.31	5.44	20386.64f	3.99	5.44
20047.62f	1.22	4.39	20392.59f	0.85	4.71
20063.52f	8.04	4.55	20392.68f	0.94	4.71
20282.50f	0.12	4.47	20423.54f	4.54	5.32

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION C					
J. D. and Telescope	$\kappa$ Pav Phase	J. D. and Telescope	$\kappa$ Pav Phase	J. D. and Telescope	$\kappa$ Pav Phase
20739.68f	2.60	5.44	21022.68f	3.87	5.32
20749.52f	3.35	5.44	21025.82f	7.01	5.38
20751.52f	5.35	5.49	21038.77f	1.78	5.38
20756.50f	1.24	4.87	21046.68f	0.60	4.87
20756.33f	1.27	5.20	21047.72f	1.64	4.95
20757.56f	2.30	5.32	21050.68f	4.60	5.61
20775.55f	2.11	5.38	21051.66f	5.58	5.49
20777.49f	4.05	5.44	21064.63f	0.38	4.79
20778.55f	5.11	5.49	21065.62f	1.37	5.03
20783.50f	0.98	5.20	21078.54f	5.20	5.61
20938.89f	1.87	5.32	21078.68f	5.34	5.44
20938.91f	1.89	5.20	21080.55f	7.21	5.20
20991.81f	0.26	4.95	21081.54f	8.20	4.87
20994.84f	3.29	5.32	21092.63f	1.11	5.15
21007.83f	7.19	4.95	21093.67f	2.15	5.32
21007.86f	7.22	5.32	21126.51f	7.73	4.71
21009.80f	0.08	4.87	21135.53f	7.66	4.95
21010.76f	1.04	4.79	21138.56f	1.60	5.32
21011.74f	2.02	5.20	21169.49f	5.27	5.61
21011.84f	2.12	5.44	21309.86f	0.23	4.79
21013.76f	4.04	5.61	21331.87f	4.07	5.44
21017.64f	7.92	4.71	21332.84f	5.04	5.44
21017.81f	8.09	5.15	21333.89f	6.09	5.38
21021.71f	2.90	5.61	21362.78f	7.71	5.26

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION C			J. D. and Telescope			J. D. and Telescope		
	κ Pav Phase	κ Pav Mag.	J. D. and Telescope	κ Pav Phase	κ Pav Mag.	J. D. and Telescope	κ Pav Phase	κ Pav Mag.	J. D. and Telescope
21814.67f	5.20	5.44	22584.51f	2.56	4.87	23307.52f	7.62	5.44	
21824.63f	6.07	5.20	22850.65f	5.15	5.44	23320.54f	2.46	4.79	
21833.62f	5.98	5.32	22871.65f	7.97	5.20	23338.53f	2.28	4.71	
21834.62f	6.98	5.44	22936.53f	0.15	4.79	23533.86f	6.76	5.61	
21874.51f	1.43	4.63	23176.86f	0.19	5.26	23535.74f	8.64	5.15	
22082.86f	9.84	4.23	23179.76f	7.09	5.44	23533.86f	6.76	5.61	
22129.60f	2.05	4.63	23191.71f	0.87	4.79	23535.74f	8.64	5.38	
22138.55f	1.91	4.71	23194.79f	3.95	5.26	23566.84f	3.39	4.87	
22161.65f	6.84	5.49	23197.78f	6.94	5.52	23573.82f	1.28	4.71	
22164.58f	0.68	4.79	23206.74f	6.81	5.49	23576.71f	4.17	5.26	
22175.56f	2.57	4.79	23209.72f	0.70	4.71	23619.65f	1.67	4.71	
22190.61f	8.53	5.03	23219.67f	1.56	4.87	23647.56f	2.32	4.87	
22193.53f	2.37	4.87	23221.70f	3.59	5.44	23648.55f	3.31	4.95	
22196.56f	5.40	5.49	23222.68f	4.57	5.38	23673.53f	1.02	4.79	
22229.53f	2.01	4.79	23234.61f	7.41	5.44	23692.53f	1.85	4.79	
22256.54f	1.76	5.15	23236.69f	0.41	5.03	23902.87z	3.16	4.79	
22488.63f	6.65	5.20	23237.68f	1.40	4.79	23918.78z	0.90	4.95	
22516.64f	7.40	5.32	23247.59f	2.22	4.87	24273.87z	1.55	4.87	
22516.68f	7.44	5.32	23250.76f	5.39	5.44	24296.76z	6.27	5.44	
22525.63f	7.30	5.20	23251.68f	6.31	5.73	24299.72z	0.14	5.20	
22542.55f	6.04	5.44	23265.65f	2.10	4.87	24318.70z	0.94	5.15	
22543.56f	7.04	5.32	23269.61f	6.06	5.67	24319.76z	2.00	4.79	
22577.52f	4.66	5.61	23278.58f	5.94	5.44	24326.69z	8.93	5.44	
22578.52f	5.66	5.61	23282.58f	0.86	4.79	24328.69z	1.85	4.87	

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION C						SECTION C					
J. D. and Telescope	$\kappa$ Pav Phase										
24352.62 <sup>e</sup>	7.60	5.61	24626.52 <sup>e</sup>	8.86	5.44	24716.78 <sup>e</sup>	8.23	5.44	24728.57 <sup>e</sup>	1.85	4.87
24356.58 <sup>e</sup>	2.47	5.09	24647.71 <sup>e</sup>	2.79	4.79	24732.64 <sup>e</sup>	5.92	5.44	24755.58 <sup>e</sup>	1.60	5.03
24371.57 <sup>e</sup>	8.37	5.44	24648.70 <sup>e</sup>	3.78	5.20	24788.54 <sup>e</sup>	7.30	5.67	24788.54 <sup>e</sup>	7.30	5.67
24371.64 <sup>e</sup>	8.44	5.49	24670.70 <sup>e</sup>	7.60	5.61	24755.58 <sup>e</sup>	5.32	5.38	24788.54 <sup>e</sup>	6.17	5.38
24411.52 <sup>e</sup>	2.88	4.87	24704.70 <sup>e</sup>	5.25	5.25	24788.54 <sup>e</sup>	6.17	5.38	24788.54 <sup>e</sup>	6.17	5.38
24433.51 <sup>e</sup>	6.70	5.73	24705.62 <sup>e</sup>			24788.54 <sup>e</sup>			24788.54 <sup>e</sup>		
J. D. and Telescope	BB Sgr Phase										
14874.69 <sup>f</sup>	6.02	7.53	15533.69 <sup>f</sup>	1.34	7.73	15885.83 <sup>f</sup>	1.73	8.14			
14876.60 <sup>f</sup>	1.29	7.73	15542.83 <sup>f</sup>	3.84	8.58	15890.82 <sup>e</sup>	0.08	7.73			
14890.60 <sup>f</sup>	2.02	8.41	15557.62 <sup>f</sup>	5.36	7.94	15897.70 <sup>f</sup>	0.32	7.47			
14904.57 <sup>f</sup>	2.71	8.55	15558.68 <sup>f</sup>	6.42	7.53	15903.83 <sup>f</sup>	6.45	7.47			
14919.58 <sup>f</sup>	4.45	8.64	15561.67 <sup>f</sup>	2.77	8.51	15914.69 <sup>f</sup>	4.04	8.55			
14939.60 <sup>f</sup>	4.56	8.51	15575.67 <sup>f</sup>	3.50	8.68	15925.75 <sup>f</sup>	1.83	8.21			
14953.53 <sup>f</sup>	5.21	8.00	15602.56 <sup>f</sup>	3.84	8.68	15930.69 <sup>e</sup>	0.13	7.53			
15148.72 <sup>f</sup>	1.30	7.94	15611.63 <sup>e</sup>	6.27	7.67	15933.68 <sup>f</sup>	3.12	8.41			
15151.83 <sup>e</sup>	4.41	8.48	15627.56 <sup>e</sup>	2.29	8.48	15934.65 <sup>f</sup>	4.09	8.55			
15233.72 <sup>e</sup>	0.02	7.47	15632.57 <sup>f</sup>	0.66	7.47	15940.64 <sup>f</sup>	3.44	8.51			
15248.65 <sup>e</sup>	1.68	8.34	15634.57 <sup>f</sup>	2.66	8.34	15944.67 <sup>e</sup>	0.84	7.40			
15264.57 <sup>f</sup>	4.33	8.68	15635.58 <sup>e</sup>	3.67	8.51	15962.60 <sup>e</sup>	5.49	8.07			
15308.53 <sup>f</sup>	1.83	8.21	15653.51 <sup>e</sup>	1.69	8.27	15962.63 <sup>e</sup>	5.52	7.94			
15518.83 <sup>e</sup>	6.39	7.33	15665.49 <sup>e</sup>	0.40	7.67	15971.56 <sup>f</sup>	1.18	8.21			
15532.70 <sup>f</sup>	0.35	7.47	15855.88 <sup>f</sup>	4.96	8.27	15974.61 <sup>e</sup>	4.23	8.55			

## SHAPLEY

## TWENTY-FIVE SOUTHERN CEPHEID VARIABLE STARS

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TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION C						J. D. and Telescope	SECTION C					
	BB Sgr Phase	BB Sgr Mag.	J. D. and Telescope	BB Sgr Phase	BB Sgr Mag.	J. D. and Telescope		BB Sgr Phase	BB Sgr Mag.	J. D. and Telescope	BB Sgr Phase	BB Sgr Mag.	
15988.55e	4.89	8.34	16319.54f	4.04	8.64	16679.70e	2.45	8.21					
15993.54f	3.25	8.34	16340.65f	5.24	8.48	16683.52f	3.00	8.34					
16006.60f	3.03	8.34	16341.59e	6.18	7.80	16683.62f	3.10	8.41					
16007.60e	4.03	8.64	16344.58e	2.54	8.41	16697.67f	3.88	8.48					
16010.57f	0.37	7.67	16348.60e	6.56	7.73	16711.58f	4.51	8.48					
16016.59e	6.39	7.94	16359.61f	4.29	8.58	16719.54e	5.84	7.80					
16023.57f	0.09	7.47	16361.62f	6.30	7.40	16724.53e	4.19	8.68					
16027.55f	4.07	8.58	16372.54e	3.95	8.61	16724.59f	4.25	8.58					
16033.52f	3.41	8.48	16376.62f	1.39	8.14	16726.55f	6.21	7.60					
16043.50e	0.11	7.40	16407.53f	5.76	7.67	16728.54e	1.56	8.34					
16055.47e	5.45	8.21	16583.83f	2.86	8.51	16753.53f	0.01	7.67					
16226.81f	4.23	8.64	16593.79f	6.19	7.53	16755.52f	2.00	8.48					
16230.81f	1.59	8.07	16606.80f	5.92	7.67	16760.53e	0.37	7.33					
16241.73f	5.88	7.60	16608.89f	1.38	7.94	16766.51f	6.35	7.67					
16243.84e	1.35	8.41	16614.78f	0.63	7.80	16822.89f	3.45	8.55					
16253.71f	4.58	8.27	16617.83e	3.68	8.61	16843.84f	4.49	8.51					
16254.82f	5.69	7.73	16635.72f	1.66	8.27	16858.82f	6.19	7.87					
16265.79e	3.39	8.48	16639.71f	5.65	8.07	16968.80f	2.90	8.34					
16268.87f	6.47	7.80	16643.78e	3.08	8.41	16976.79f	4.25	8.71					
16284.84f	2.53	8.58	16649.71e	2.38	8.31	16979.77f	0.60	7.80					
16292.77f	3.82	8.55	16650.72f	3.39	8.55	17000.82f	1.74	8.34					
16297.69f	2.11	8.27	16663.80f	3.19	8.41	17004.65f	5.57	8.14					
16308.64f	6.42	7.73	16669.79f	2.54	8.48	17006.77e	1.05	7.47					
16311.63f	2.77	8.41	16670.74e	3.49	8.55	17009.77f	4.05	8.61					

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	BB Sgr Phase	J. D. and Telescope	BB Sgr Phase	SECTION C		J. D. and Telescope	BB Sgr Phase	J. D. and Telescope	BB Sgr Phase
				Mag.	Mag.				
17010.69f	4.97	8.61	17376.67f	5.92	7.60	17758.72f	3.04	8.55	
17018.67f	6.31	7.53	17380.73f	3.35	8.68	17769.71e	0.76	7.33	
17019.77f	0.77	7.94	17384.72f	0.70	7.67	17774.72f	5.77	8.07	
17032.77f	0.50	7.60	17394.61f	3.95	8.61	17787.64f	5.41	8.27	
17034.67e	2.40	8.34	17394.74f	4.08	8.68	17798.60e	3.10	8.58	
17038.62f	6.35	7.60	17403.72f	6.43	7.53	17801.61e	6.11	7.40	
17039.61f	0.70	7.73	17417.75e	0.55	7.33	17813.50f	4.73	8.41	
17048.67e	3.13	8.27	17436.66f	6.18	7.80	17813.55f	4.78	8.55	
17053.72f	1.54	8.27	17441.60e	4.49	8.55	17814.59e	5.82	7.67	
17066.72f	1.27	8.34	17445.60f	1.85	8.34	17816.63f	1.22	8.51	
17076.61f	4.52	8.64	17445.60e	1.85	8.34	17820.55f	5.14	8.51	
17076.67f	4.58	8.68	17447.57f	3.82	8.51	17836.57f	1.25	8.27	
17077.65f	5.56	8.07	17450.55f	0.16	7.87	17849.55e	0.96	7.67	
17084.55e	5.82	7.67	17462.54e	5.52	8.21	17858.53e	3.30	8.48	
17105.61f	0.34	7.73	17465.56f	1.90	8.21	17850.54e	1.95	7.67	
17107.62f	2.35	8.34	17485.59f	2.02	8.41	18027.89f	0.10	7.80	
17110.56e	5.29	8.21	17496.49e	6.28	7.33	18042.86f	1.80	8.21	
17132.49e	0.67	8.07	17683.87f	1.20	8.27	18042.90f	1.84	8.48	
17135.56f	3.74	8.74	17703.90f	1.31	8.14	18063.83e	2.86	8.34	
17325.84f	1.55	8.27	17709.84e	0.62	7.80	18064.83e	3.86	8.68	
17335.80f	4.88	8.55	17727.75f	5.25	8.34	18082.75f	1.87	8.41	
17360.72f	3.25	8.34	17734.84f	5.71	8.07	18097.79e	3.63	8.48	
17366.75e	2.64	8.48	17738.84f	3.07	8.55	18097.85f	3.69	8.55	
17373.79e	3.04	8.34	17746.73e	4.32	8.55	18111.78f	4.35		

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Phase		BB Sgr		J. D. and Phase		BB Sgr		J. D. and Phase		BB Sgr	
BB Sgr Telescope	Phase	Mag.	BB Sgr Telescope	Phase	Mag.	BB Sgr Telescope	Phase	Mag.	BB Sgr Telescope	Phase	Mag.
18122.73e	2.03	8.21	18467.80f	1.98	8.55	18594.52f	2.60	8.48	18806.87f	2.58	8.51
18129.76e	2.42	8.41	18472.69f	0.24	7.47	18820.82f	3.25	8.48			
18130.68f	3.34	8.61	18477.80f	5.35	8.21	18821.79f	4.22	8.74			
18132.66f	5.32	8.34	18495.74e	3.38	8.48	18821.84f	4.27	8.71			
18156.61f	2.72	8.34	18499.71f	0.71	7.94	18824.85f	0.65	8.00			
18158.53f	4.64	8.64	18500.72f	1.72	8.14	18825.77f	1.57	8.07			
18158.58f	4.69	8.64	18501.72f	2.59	8.45	18825.79e	1.59	8.00			
18171.53f	4.37	8.55	18503.70f	4.70	8.64	18827.79e	3.59	8.55			
18174.59e	0.79	7.94	18505.66f	0.02	7.67	18831.76f	0.92	8.07			
18181.57e	1.14	8.00	18506.68f	1.04	8.07	18832.72f	1.88	8.34			
18181.66f	1.23	8.41	18512.61f	0.34	7.60	18834.83f	3.99	8.68			
18183.53f	3.10	8.41	18516.60f	4.33	8.71	18848.79f	4.68	8.55			
18183.58e	3.15	8.21	18526.63e	1.08	7.87	18849.76f	5.65	8.21			
18199.56f	5.85	7.87	18531.61f	6.06	7.53	18855.75f	5.00	8.55			
18209.53f	2.55	8.48	18533.55f	1.37	8.21	18857.70f	0.31	7.47			
18214.51e	0.89	7.60	18534.63f	2.45	8.34	18859.70f	2.31	8.34			
18221.53f	1.28	8.34	18539.64f	0.82	8.21	18859.72e	2.33	8.34			
18221.55e	1.30	8.27	18541.50f	2.68	8.41	18864.76f	0.74	8.07			
18427.84f	1.84	8.48	18561.56f	2.83	8.68	18870.70f	0.04	7.73			
18438.84f	6.21	8.00	18565.53f	0.16	7.73						
18441.75f	2.48	8.34	18568.52e	3.15	8.41	18884.63f	0.70	7.80			
18451.82e	5.91	7.80	18569.55f	4.18	8.68	18889.69f	5.76	8.00			
18453.80f	2.16	8.14	18571.52f	6.15	7.94	18911.62f	1.14	7.94			
18454.83f	2.19	8.21	18574.53f	2.59	8.21	18918.62f	1.45	7.94			

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION C			SHAPLEY				
	BB Sgr Phase	J. D. and Telescope	BB Sgr Phase	J. D. and Telescope	BB Sgr Phase	J. D. and Telescope		
18919.54f	2.42	8.27	19265.60e	3.37	8.34	19601.68f	0.97	7.80
18943.54e	6.51	7.60	19276.56f	1.05	7.94	19603.65f	2.94	8.34
18948.50e	4.83	8.51	19290.58f	1.80	8.41	19603.70f	2.99	8.48
19153.83f	4.42	8.61	19292.54e	3.76	8.48	19604.55f	3.84	8.51
19195.80e	6.57	7.67	19292.56f	3.78	8.64	19606.64f	5.93	7.60
19204.74f	2.24	8.21	19300.50f	5.08	8.34	19616.67f	2.69	8.34
19206.73f	4.23	8.61	19300.53e	5.11	8.21	19631.62f	4.36	8.51
19213.67f	4.53	8.68	19301.54f	6.12	8.00	19632.58f	5.32	8.14
19215.74f	6.60	7.73	19310.52f	1.83	8.34	19645.63f	5.10	8.21
19218.75e	2.98	8.34	19311.53f	2.84	8.41	19650.65f	3.48	8.34
19224.65f	2.24	8.41	19327.51f	5.55	7.94	19652.56f	5.39	8.00
19225.61f	3.20	8.41	19511.82f	4.03	8.64	19655.56f	1.76	8.00
19232.75f	3.70	8.51	19513.85f	6.06	7.60	19656.56f	2.76	8.41
19233.66f	4.61	8.51	19518.82f	4.39	8.68	19657.56f	3.76	8.48
19234.72f	5.67	8.07	19532.72f	5.02	8.34	19658.63e	4.73	8.55
19236.66f	0.98	8.21	19542.81f	1.83	8.00	19660.54f	0.10	7.47
19237.67f	1.99	8.00	19545.81f	4.83	8.48	19676.51f	2.80	8.27
19238.70f	3.02	8.61	19561.72f	0.83	7.67	19677.52f	3.81	8.51
19240.67e	4.99	8.27	19562.69f	1.80	8.00	19690.48e	3.49	8.48
19241.61f	5.93	7.87	19566.70f	5.81	7.73	19711.63f	4.63	8.48
19251.67f	2.71	8.48	19571.80f	4.28	8.55	19889.88f	3.79	8.55
19253.60f	4.64	8.58	19572.70f	5.18	8.21	19896.80f	4.07	8.51
19264.60f	2.37	8.34	19588.72f	1.29	8.00	19897.80f	5.07	8.51
19264.64f	2.41	8.48	19601.64f	0.93	7.73	19898.87f	6.14	7.53

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION C			BB Sgr		
	BB Sgr Phase	BB Sgr Mag.	J. D. and Telescope	BB Sgr Phase	BB Sgr Mag.	J. D. and Telescope
19911.90f	5.90	7.94	19973.62f	1.25	7.73	20300.77e
19912.80f	0.16	7.67	19975.70f	3.33	8.55	20306.74f
19916.84e	4.20	8.55	19977.67f	5.30	8.07	20306.76e
19921.80e	2.53	8.27	19985.52f	6.51	7.53	20307.56f
19921.84f	2.57	8.34	19985.56f	6.55	7.47	20328.60f
19922.82f	3.55	8.41	19988.52f	2.88	8.51	20328.70f
19923.84f	4.57	8.48	19989.52f	3.88	8.55	20329.69f
19929.78e	3.87	8.55	20000.59e	1.67	8.07	20330.67f
19931.66f	5.75	7.53	20001.62e	2.70	8.27	20334.69e
19933.78e	1.23	7.73	20006.55e	1.00	7.80	20337.66f
19933.82f	1.27	8.00	20012.57f	0.38	7.47	20338.58f
19942.76f	3.58	8.48	20013.56f	1.37	8.00	20341.69f
19942.81f	3.63	8.48	20015.56f	3.37	8.41	20352.70f
19946.74e	0.92	7.94	20027.56f	2.10	8.21	20354.58f
19947.72f	1.90	8.00	20031.57f	6.11	7.60	20357.64f
19947.74e	1.92	8.00	20043.52f	4.78	8.55	20361.62f
19949.69f	3.87	8.64	20044.56f	5.82	7.60	20363.54f
19950.71f	4.89	8.48	20044.61f	5.87	7.60	20366.58f
19951.72f	5.90	7.67	20064.48e	5.83	7.47	20367.59f
19955.70e	3.24	8.41	20069.52f	4.24	8.58	20372.62f
19959.58f	0.49	7.73	20276.81e	5.79	7.73	20384.53f
19961.60f	2.51	8.21	20280.81e	3.15	8.34	20387.59f
19972.75f	0.38	7.47	20296.77e	5.84	7.40	20391.58f
19973.51f	1.14	7.80	20297.67f	0.10	7.53	20394.58f

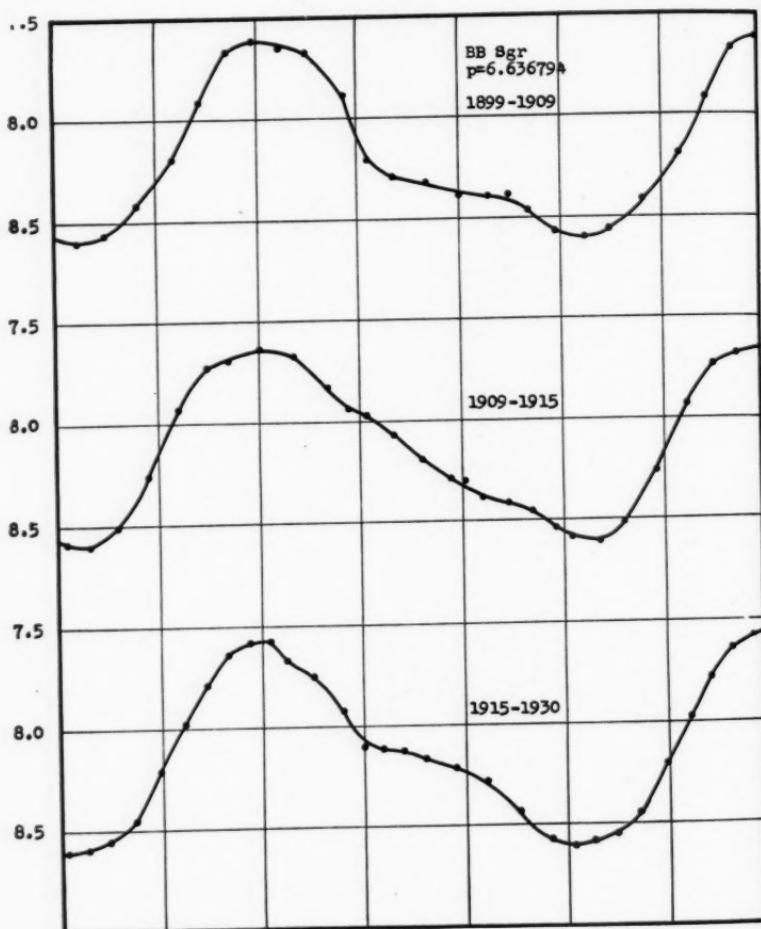


TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

J. D. and Telescope	SECTION C			BB Sgr			J. D. and Telescope			BB Sgr			J. D. and Telescope		
	BB Sgr	Phase	Mag.	J. D. and Telescope	BB Sgr	Phase	J. D. and Telescope	BB Sgr	Phase	J. D. and Telescope	BB Sgr	Phase	J. D. and Telescope	BB Sgr	
20398.55f	1.43	7.94	20719.60f	3.91	8.55	21037.68e	3.42	8.21							
20440.55f	3.61	8.64	20719.64f	3.95	8.51	21038.67f	4.41	8.55							
20444.55f	0.97	7.80	20721.65f	5.96	7.53	21038.74e	4.48	8.55							
20580.87e	4.55	8.48	20724.64f	2.31	8.21	21039.70f	5.44	7.80							
20626.82f	4.05	8.51	20747.52f	5.28	7.94	21047.76f	0.23	7.47							
20628.79e	6.02	7.40	20747.57f	5.33	7.94	21048.68f	1.15	7.73							
20651.80f	2.48	8.41	20751.57f	2.70	8.07	21062.63f	1.83	8.00							
20651.88f	2.56	8.34	20752.49f	3.62	8.55	21064.61e	3.81	8.48							
20652.78f	3.46	8.55	20766.52f	4.37	8.74	21064.67f	3.87	8.58							
20655.81f	6.49	7.73	20769.48f	0.70	7.67	21066.63f	5.83	7.73							
20661.76f	5.80	7.94	20776.52f	1.10	8.21	21068.68f	1.24	8.21							
20667.80f	5.20	8.41	20778.51f	3.09	8.27	21072.62f	5.18	7.87							
20669.79f	0.56	7.60	21006.79f	5.72	7.80	21077.64f	3.56	8.51							
20681.71f	5.84	8.07	21007.78f	0.01	7.73	21079.58f	5.50	8.21							
20682.76f	0.25	7.60	21008.81f	1.10	7.67	21079.63f	5.55	7.80							
20688.65e	6.14	7.40	21009.83f	2.12	8.21	21080.60f	6.52	7.26							
20688.71f	6.20	7.87	21011.76f	4.05	8.68	21092.59f	5.24	8.34							
20691.62f	2.48	8.21	21012.74f	5.03	8.51	21095.61e	1.62	8.14							
20691.72f	2.58	8.41	21018.79f	4.44	8.64	21099.55f	5.56	7.73							
20693.79f	4.65	8.51	21022.76f	1.78	7.94	21099.59f	5.60	8.00							
20695.66f	6.52	7.53	21023.74f	2.76	8.21	21103.55f	2.93	8.07							
20698.71f	2.93	8.34	21024.75f	3.77	8.61	21104.54f	3.92	8.58							
20708.63f	6.21	7.94	21026.75f	5.77	7.94	21106.60e	5.98	7.87							
20709.67f	0.62	7.67	21035.72f	1.46	7.87	21120.58e	0.05	7.53							

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.—*Cont.*

SECTION C						SECTION C					
J. D. and Telescope	BB Sgr Phase	BB Sgr Mag.	J. D. and Telescope	BB Sgr Phase	BB Sgr Mag.	J. D. and Telescope	BB Sgr Phase	BB Sgr Mag.	J. D. and Telescope	BB Sgr Phase	BB Sgr Mag.
21121.52e	0.99	8.14	21437.60f	5.14	8.51	21803.62e	6.13	7.67			
21135.52f	1.71	8.34	21447.64f	9.00	8.21	21804.62e	0.50	8.00			
21137.53f	3.72	8.55	21450.60f	4.86	8.51	21805.62f	1.50	7.94			
21147.49e	0.41	7.67	21451.58f	5.84	7.67	21806.66f	2.54	8.14			
21154.52f	0.80	7.80	21463.54f	1.17	8.21	21817.57f	6.81	7.53			
21155.49f	1.77	7.94	21463.59f	1.22	8.00	21817.60f	0.21	7.53			
21156.51f	2.79	8.14	21465.56f	3.19	8.21	21818.58f	1.19	8.00			
21157.51f	3.79	8.61	21465.60f	3.23	8.61	21819.58f	2.19	8.07			
21160.50f	0.15	7.80	21460.55f	1.54	8.07	21819.59f	2.20	8.00			
21161.50f	1.15	8.21	21460.60e	1.59	8.21	21821.62e	4.23	8.41			
21343.82e	4.27	8.55	21462.52f	3.51	8.55	21835.56f	4.89	8.55			
21364.83f	5.37	8.14	21476.58e	4.30	8.55	21836.54f	5.87	7.60			
21374.79e	2.06	8.27	21483.53e	4.61	8.51	21844.56f	0.62	7.53			
21393.75f	1.11	8.14	21515.48e	3.38	8.48	21847.54f	3.60	8.48			
21394.76f	2.12	8.34	21515.49e	3.39	8.48	22029.90e	0.13	7.80			
21398.67f	6.03	7.80	21523.53f	4.79	8.51	22073.83e	4.23	8.64			
21398.70f	6.06	7.80	21535.48e	3.44	8.55	22083.86f	0.99	8.14			
21399.70f	0.42	7.94	21675.90e	4.51	8.55	22135.67f	6.34	7.47			
21400.72e	1.44	8.14	21757.67f	6.64	7.73	22148.66e	6.06	7.40			
21402.69f	3.41	8.68	21758.72f	1.05	7.94	22165.62e	3.11	8.48			
21424.63f	5.44	8.27	21758.76f	1.09	7.94	22166.51f	4.00	8.51			
21425.67f	6.48	7.40	21778.67e	1.09	8.14	22173.65f	4.50	8.48			
21427.62f	1.79	8.07	21788.68f	4.47	8.68	22173.65e	4.50	8.34			
21428.66f	2.83	8.21	21790.67f	6.46	7.53	22191.59e	2.53	8.27			

TWENTY-FIVE SOUTHERN CEPHEID VARIABLE STARS.—*Contd.*

TABLE IV.—PHOTOGRAPHIC OBSERVATIONS OF CEPHEID VARIABLE STARS.

SECTION C					
J. D. and Telescope	BB Sgr Phase	BB Sgr Mag.	J. D. and Telescope	BB Sgr Phase	J. D. and Telescope
22194.56f	5.50	7.87	22897.61e	5.05	8.48
22195.57f	6.51	7.67	22907.65e	1.82	8.14
22215.52e	6.55	7.33	22936.59f	4.21	8.51
22225.53f	3.29	8.51	22940.53e	1.51	8.34
22228.54f	6.30	7.87	22952.52e	6.87	7.40
22233.52e	4.64	8.55	22977.54e	5.34	8.34
22253.52f	4.73	8.55	22985.48e	0.01	7.26
22433.86e	5.88	8.07	23181.82f	3.88	8.71
22461.79e	0.62	7.67	23181.87f	3.93	8.64
22542.64f	1.83	8.21	23194.75f	3.54	8.55
22549.67f	2.23	8.41	23198.82f	0.97	7.53
22551.65f	4.21	8.61	23205.65f	1.16	8.27
22552.55f	5.11	8.34	23205.80f	1.31	8.21
22584.52e	3.89	8.61	23206.69f	2.20	8.07
22584.55f	3.92	8.55	23209.72f	5.23	8.21
22607.56f	0.38	7.80	23219.71f	1.95	8.34
22620.50e	0.05	7.53	23222.72f	4.96	8.41
22767.89e	1.33	8.34	23225.75f	1.35	8.27
22821.80e	2.25	7.87	23235.68f	4.65	8.55
22840.77e	1.31	7.94	23248.59f	4.28	8.71
22843.78e	4.32	8.58	23248.68f	4.37	8.48
22850.78f	4.68	8.58	23253.61f	2.67	8.27

TABLE V

## NORMAL POINTS FOR TWENTY-FOUR CEPHEID VARIABLES

Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.
1. V Centauri							
0.030	7.868	0.239	7.960	0.470	7.018	0.745	7.552
0.083	7.892	0.283	7.936	0.522	7.007	0.792	7.676
0.126	7.903	0.326	7.820	0.586	7.074	0.843	7.746
0.160	7.924	0.368	7.633	0.644	7.266	0.896	7.750
0.197	7.933	0.416	7.292	0.698	7.448	0.964	7.792
2. R Trianguli Australis							
0.029	8.005	0.279	7.910	0.538	7.094	0.736	7.730
0.075	8.022	0.337	7.766	0.561	7.178	0.799	7.774
0.116	8.034	0.387	7.506	0.582	7.236	0.864	7.839
0.157	8.018	0.411	7.285	0.632	7.316	0.929	7.974
0.213	7.979	0.456	7.145	0.682	7.510	0.979	8.022
3. U Normae							
0.104	11.243	0.351	10.760	0.573	10.254	0.799	10.954
0.127	11.246	0.406	10.489	0.616	10.431	0.842	11.133
0.190	11.205	0.445	10.125	0.665	10.664	0.896	11.202
0.239	11.074	0.492	9.953	0.709	10.774	0.962	11.212
0.287	10.888	0.539	10.066	0.755	10.804		
4. S Trianguli Australis							
0.024	7.440	0.265	7.730	0.517	6.512	0.750	7.183
0.070	7.614	0.316	7.469	0.555	6.599	0.824	7.260
0.118	7.789	0.370	7.176	0.598	6.740	0.888	7.264
0.167	7.816	0.423	6.904	0.641	6.796	0.932	7.292
0.222	7.819	0.478	6.606	0.689	6.927	0.978	7.364
5. U Trianguli Australis							
0.013	8.786	0.349	8.688	0.608	8.146	0.823	8.659
0.084	8.808	0.384	8.532	0.647	8.192	0.873	8.714
0.146	8.814	0.433	8.272	0.666	8.308	0.938	8.746
0.200	8.838	0.479	8.006	0.696	8.400		
0.254	8.829	0.530	8.020	0.738	8.460		
0.310	8.775	0.561	8.123	0.779	8.562		

TABLE V.—NORMAL POINTS FOR TWENTY-FOUR CEPHEID VARIABLES.—*Cont.*

Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.
6. S Normae							
0.006	7.843	0.292	7.448	0.581	7.308	0.867	7.793
0.065	7.833	0.355	7.387	0.626	7.337	0.906	7.796
0.119	7.776	0.415	7.290	0.688	7.380	0.952	7.826
0.177	7.675	0.471	7.198	0.722	7.544		
0.234	7.619	0.532	7.202	0.756	7.706		
0.265	7.542	0.549	7.218	0.817	7.767		
7. RW Trianguli Australis							
0.010	11.528	0.318	11.659	0.542	10.927	0.773	11.352
0.055	11.568	0.361	11.580	0.572	10.991	0.810	11.395
0.105	11.606	0.419	11.404	0.606	11.035	0.850	11.375
0.149	11.651	0.462	11.173	0.650	11.122	0.888	11.402
0.208	11.680	0.483	10.929	0.696	11.247	0.921	11.472
0.271	11.685	0.512	10.836	0.736	11.309	0.960	11.501
8. RV Scorp.ii.							
0.022	8.046	0.330	7.779	0.617	7.329	0.879	7.789
0.072	8.084	0.379	7.528	0.655	7.479	0.935	7.930
0.124	8.104	0.428	7.316	0.687	7.518	0.980	8.016
0.171	8.122	0.476	7.121	0.724	7.560		
0.218	8.111	0.532	7.115	0.764	7.615		
0.274	8.002	0.580	7.226	0.818	7.688		
9. X Sagittarii.							
1.							
0.012	5.964	0.366	5.276	0.583	5.160	0.768	5.500
0.086	5.937	0.435	4.996	0.645	5.224	0.805	5.634
0.218	5.539	0.507	4.865	0.696	5.312	0.866	5.774
0.325	5.334	0.549	4.965	0.734	5.416	0.938	5.885
2.							
0.056	5.848	0.305	5.839	0.512	4.850	0.755	5.617
0.126	5.928	0.366	5.672	0.571	5.032	0.826	5.697
0.194	5.966	0.415	5.369	0.623	5.264	0.898	5.856
0.249	5.899	0.457	5.021	0.685	5.485	0.978	5.877
3.							
0.019	5.828	0.219	5.956	0.446	4.959	0.778	5.479
0.072	5.869	0.280	5.924	0.522	4.943	0.851	5.533
0.110	5.922	0.338	5.682	0.602	5.180	0.892	5.651
0.155	5.961	0.394	5.312	0.681	5.336	0.949	5.779

TABLE V.—NORMAL POINTS FOR TWENTY-FOUR CEPHEID VARIABLES.—*Cont.*

Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.
4.							
0.040	5.782	0.318	5.622	0.588	4.908	0.803	5.384
0.108	5.805	0.401	5.380	0.628	5.075	0.856	5.504
0.182	5.807	0.489	4.980	0.688	5.176	0.920	5.664
0.249	5.740	0.552	4.789	0.748	5.296	0.985	5.733
5.							
0.025	5.659	0.253	5.855	0.528	4.974	0.834	5.388
0.083	5.738	0.353	5.684	0.600	5.064	0.905	5.477
0.135	5.786	0.431	5.344	0.685	5.196	0.970	5.585
0.191	5.814	0.469	4.990	0.764	5.316		
6.							
0.073	5.750	0.324	5.688	0.762	5.059	0.995	5.755
0.134	5.772	0.383	5.572	0.789	5.252		
0.196	5.779	0.458	5.257	0.818	5.416		
0.258	5.769	0.692	4.895	0.895	5.623		
10. RY Scorpis.							
0.009	9.427	0.247	9.497	0.539	8.392	0.763	8.915
0.055	9.503	0.300	9.384	0.589	8.479	0.822	9.070
0.100	9.587	0.348	9.255	0.631	8.563	0.874	9.197
0.152	9.608	0.406	8.953	0.664	8.682	0.917	9.290
0.201	9.583	0.478	8.528	0.706	8.782	0.960	9.367
11. S Arae.							
0.042	11.076	0.317	11.097	0.594	10.248	0.898	10.939
0.097	11.077	0.353	10.984	0.643	10.463	0.932	11.015
0.148	11.068	0.406	10.570	0.695	10.629	0.966	11.044
0.184	11.080	0.462	10.148	0.742	10.700	0.999	11.053
0.226	11.088	0.490	9.997	0.780	10.792		
0.271	11.089	0.543	10.100	0.838	10.863		
12. W Sagittarii							
1.							
0.032	6.038	0.300	6.112	0.587	5.072	0.796	5.484
0.075	6.130	0.356	5.748	0.639	5.196	0.852	5.524
0.149	6.205	0.452	5.184	0.703	5.284	0.916	5.646
0.239	6.253	0.537	4.936	0.757	5.372	0.982	5.865

TABLE V.—NORMAL POINTS FOR TWENTY-FOUR CEPHEID VARIABLES.—*Cont.*

Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.
2.							
0.014	5.982	0.280	5.932	0.608	5.092	0.833	5.590
0.077	6.104	0.377	5.353	0.681	5.300	0.900	5.759
0.129	6.159	0.465	4.808	0.733	5.359	0.956	5.832
0.195	6.173	0.534	4.804	0.776	5.399		
3.							
0.012	5.985	0.332	5.794	0.553	4.892	0.879	5.606
0.073	6.064	0.375	5.465	0.601	5.045	0.951	5.887
0.141	6.102	0.434	5.144	0.657	5.189		
0.201	6.085	0.478	4.769	0.726	5.292		
0.271	6.038	0.510	4.712	0.803	5.368		
4.							
0.081	6.042	0.408	5.388	0.606	5.192	0.935	5.832
0.170	6.150	0.447	5.146	0.663	5.284	0.993	5.915
0.238	6.122	0.481	4.818	0.742	5.324		
0.298	5.969	0.518	4.734	0.828	5.512		
0.358	5.675	0.559	4.962	0.894	5.725		
5.							
0.019	5.910	0.278	6.029	0.475	4.784	0.704	5.452
0.075	5.952	0.341	5.727	0.527	4.789	0.766	5.477
0.138	6.022	0.385	5.451	0.577	5.080	0.844	5.616
0.213	6.122	0.423	5.154	0.637	5.318	0.939	5.804
6.							
0.036	5.920	0.272	5.953	0.565	4.919	0.822	5.465
0.088	6.019	0.352	5.656	0.615	5.250	0.868	5.560
0.139	6.070	0.434	5.032	0.700	5.406	0.925	5.729
0.192	6.060	0.522	4.677	0.775	5.428	0.981	5.842
13. AP Sagittarii.							
0.048	8.239	0.303	8.081	0.613	7.737	0.890	8.096
0.092	8.270	0.363	7.814	0.682	7.904	0.940	8.117
0.133	8.276	0.423	7.612	0.736	7.944	0.996	8.163
0.182	8.302	0.474	7.534	0.775	7.984		
0.221	8.309	0.522	7.585	0.817	8.048		
0.255	8.253	0.582	7.642	0.852	8.093		

TABLE V.—NORMAL POINTS FOR TWENTY-FOUR CEPHEID VARIABLES.—*Cont.*

Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.
14. WZ Sagittarii.							
0.024	10.303	0.380	9.937	0.673	9.233	0.916	10.058
0.077	10.392	0.423	9.424	0.719	9.462	0.959	10.136
0.143	10.463	0.471	8.562	0.764	9.658	0.993	10.226
0.207	10.392	0.532	8.347	0.801	9.742		
0.278	10.233	0.576	8.677	0.838	9.808		
0.335	10.089	0.622	8.990	0.874	9.916		
15. XX Sagittarii.							
0.045	10.807	0.298	10.830	0.532	9.303	0.771	10.070
0.090	10.868	0.350	10.722	0.590	9.370	0.824	10.379
0.134	10.882	0.388	10.583	0.615	9.412	0.896	10.526
0.188	10.897	0.439	9.995	0.664	9.592	0.945	10.578
0.242	10.886	0.486	9.374	0.725	9.800	0.991	10.686
16. X Scuti.							
0.064	11.692	0.319	11.349	0.580	10.810	0.828	11.223
0.136	11.807	0.362	11.174	0.631	10.918	0.876	11.249
0.198	11.760	0.431	10.935	0.685	11.023	0.918	11.315
0.251	11.676	0.485	10.727	0.731	11.102	0.983	11.477
0.300	11.528	0.532	10.706	0.784	11.168		
17. U Sagittarii.							
0.019	8.878	0.317	8.945	0.603	8.082	0.921	8.733
0.056	8.953	0.380	8.673	0.655	8.160	0.975	8.797
0.107	9.043	0.447	8.375	0.701	8.310		
0.157	9.104	0.487	8.105	0.748	8.462		
0.202	9.070	0.521	8.002	0.799	8.566		
0.260	9.038	0.565	8.088	0.858	8.667		
18. Y Scuti.							
0.012	11.688	0.273	11.320	0.570	10.788	0.829	11.448
0.080	11.717	0.352	11.112	0.616	10.895	0.890	11.572
0.125	11.712	0.427	10.958	0.664	10.976	0.945	11.637
0.161	11.650	0.479	10.778	0.717	11.082		
0.207	11.588	0.520	10.713	0.772	11.257		
19. RU Scuti.							
0.009	11.750	0.339	11.740	0.591	10.838	0.819	11.348
0.069	11.785	0.383	11.591	0.631	10.944	0.851	11.502
0.143	11.798	0.420	11.242	0.671	11.049	0.889	11.631
0.218	11.806	0.475	10.704	0.717	11.139	0.946	11.696
0.279	11.808	0.537	10.537	0.771	11.233		

TABLE V.—NORMAL POINTS FOR TWENTY-FOUR CEPHEID VARIABLES.—*Cont.*

Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.
20. Z Scuti.							
0.059	11.930	0.361	11.046	0.634	10.682	0.823	11.532
0.126	11.948	0.409	10.741	0.668	10.776	0.862	11.660
0.182	11.840	0.467	10.318	0.690	10.834	0.909	11.787
0.237	11.635	0.523	10.293	0.715	10.984	0.983	11.844
0.304	11.294	0.570	10.522	0.766	11.289		
21. SS Scuti.							
0.012	9.870	0.289	9.717	0.539	8.790	0.811	9.432
0.081	9.909	0.332	9.525	0.609	8.913	0.877	9.662
0.132	9.914	0.369	9.273	0.666	8.989	0.951	9.792
0.170	9.881	0.411	9.016	0.721	9.057		
0.225	9.820	0.465	8.790	0.769	9.185		
22. YZ Sagittarii.							
1.							
0.016	8.786	0.284	8.390	0.551	8.188	0.767	8.540
0.069	8.745	0.346	8.330	0.600	8.362	0.795	8.550
0.129	8.638	0.404	8.231	0.646	8.425	0.850	8.629
0.178	8.550	0.459	8.131	0.683	8.469	0.928	8.742
0.227	8.478	0.507	8.078	0.719	8.512	0.974	8.786
2.							
0.039	8.462	0.280	8.256	0.570	7.656	0.822	8.192
0.078	8.540	0.346	7.927	0.634	7.835	0.872	8.289
0.118	8.580	0.399	7.732	0.675	7.929	0.905	8.295
0.168	8.605	0.449	7.690	0.710	7.966	0.941	8.381
0.222	8.508	0.509	7.622	0.765	8.060	0.990	8.410
3.							
0.008	8.438	0.300	8.201	0.548	7.676	0.819	8.169
0.065	8.574	0.345	7.970	0.501	7.748	0.875	8.210
0.112	8.603	0.388	7.770	0.656	7.926	0.942	8.282
0.151	8.591	0.430	7.636	0.693	8.096		
0.192	8.553	0.474	7.575	0.735	8.118		
0.246	8.445	0.512	7.574	0.777	8.118		

TABLE V.—NORMAL POINTS FOR TWENTY-FOUR CEPHEID VARIABLES.—*Cont.*

Phase	Mag.	Phase	Mag.	Phase	Mag.	Phase	Mag.
24. κ Pavonis.							
				1.			
0.032	5.478	0.268	5.212	0.519	4.805	0.777	5.390
0.088	5.438	0.316	4.996	0.574	4.942	0.861	5.437
0.150	5.393	0.370	4.811	0.636	5.123	0.917	5.472
0.216	5.328	0.447	4.770	0.698	5.289	0.970	5.485
				2.			
0.007	5.472	0.289	5.240	0.548	4.809	0.741	5.308
0.048	5.479	0.321	5.066	0.588	4.856	0.781	5.330
0.087	5.494	0.359	4.888	0.620	4.887	0.832	5.381
0.136	5.425	0.391	4.765	0.654	5.036	0.868	5.427
0.196	5.362	0.447	4.670	0.685	5.210	0.919	5.461
0.250	5.322	0.508	4.702	0.711	5.297	0.964	5.479
				3.			
0.035	5.377	0.342	5.396	0.606	4.877	0.870	5.088
0.170	5.505	0.445	5.208	0.683	4.794		
0.257	5.485	0.532	5.016	0.754	4.853		

